

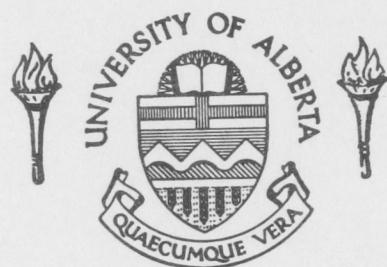
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ELEVENTH ANNUAL REPORT
OF THE
**Department of
Mines and Minerals**
OF THE
PROVINCE OF ALBERTA
FOR THE
**Fiscal Year Ended March 31st
1960**

EDMONTON:
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1960


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of the
Department of
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Year Ending March 31st
1960

EDMONTON,
THE CAPITAL CITY OF ALBERTA, CANADA.

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To the Honourable J. Percy Page,
Lieutenant Governor of the Province of Alberta.

SIR:

I have the honour to submit the Report of the Department of Mines and Minerals for the fiscal year ended March 31st, 1960.

I have the honour to be, Sir,

Your obedient servant,

ERNEST C. MANNING,

Minister of Mines and Minerals.

Edmonton, November 15th, 1960.

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CHIEF OFFICERS
DEPARTMENT OF MINES AND MINERALS
MARCH 31st, 1960

Hon. Ernest C. Manning.....*Minister*
H. H. Somerville.....*Deputy Minister*
G. W. Acorn.....*Solicitor*
C. W. Jackman.....*Statistician*
W. E. Shillabeer.....*Administrative Accountant and
Personnel Officer*

MINERAL RIGHTS DIVISION

J. W. Patrick.....*Director*
R. A. Seaton.....*Assistant Director*
D. R. Jordan.....*Supervisor of Revenue*
D. F. Morrison.....*Supervisor of Leases and Mining
Recorder, Edmonton District*
D. C. MacMillan.....*Mining Recorder, Calgary District*

MINERAL TAX DIVISION

V. L. Scott.....*Superintendent*
J. A. Savage.....*Assistant Superintendent*

MINES DIVISION

J. A. Dutton.....*Director*
J. D. B. Brown.....*Assistant Director*

PIPE LINE DIVISION

W. Rutherford.....*Superintendent*

TECHNICAL DIVISION

J. M. Novak.....*Superintendent*
E. G. Staniforth.....*Assistant Superintendent*

ELEVENTH ANNUAL REPORT

of the

Department of Mines and Minerals

HONOURABLE ERNEST C. MANNING,

*Minister of Mines and Minerals,
Edmonton, Alberta.*

SIR:

I have the honour to present the Annual Report of the Department of Mines and Minerals for the fiscal year ending March 31, 1960.

Crude oil production in 1959 increased by fifteen per cent over 1958 but was only forty-two per cent of oil production capacity. Natural gas consumption increased by thirty-four per cent. Production of propane, butane and natural gasoline each increased by over one-third, while sulphur production almost doubled.

There were twenty-seven gas processing plants operating in the Province at the end of 1959. Two plants in the Hussar field and one each in the Princess, Okotoks, Windfall, Provost, Wayne-Rosedale and Nevis fields commenced operations during the year. In addition, a plant at Carstairs commenced operations early in 1960. The present plant at Windfall is cycling wet gas for the production of light oil and condensate. A gas plant at Longview in Turner Valley which commenced operations in 1936 closed down in 1959. During the year underground storage developed specifically for natural gas liquids was used for the first time when a project at Hughenden went into operation.

Footage drilled in 1959 was approximately the same as in 1958, although initial well completions fell from 1,728 to 1,602. This is due to a greater average depth of well completions in 1959.

Nine new oil fields were designated by the Oil and Gas Conservation Board in 1959. These were Carnwood, Swan Hills, Virginia Hills, Carson Creek North, Medicine River, Judy Creek, Lobstick, Choice and Simonette. Only two of these fields, Judy Creek and Lobstick were discovered in 1959. The Carnwood, Lobstick and Keystone fields were amalgamated into Pembina early in 1960. The Pembina area accounted for the largest share of development drilling in 1959 and the Swan Hills area had the next largest share.

During the year there was a number of downward adjustments in the price of Alberta crude oil to meet changes in transportation charges, competition and currency exchange rates. The average wellhead price at the end of 1959 was \$2.39 per barrel compared to \$2.52 per barrel at the end of 1958.

The more important gas discoveries of 1959 were made at Burnt Timber northwest of Calgary, Lookout Butte southwest of Cardston and at Worsley north of Hines Creek. Substantial increases in our proven reserves were also made by development drilling in the Calgary, Carstairs and Wildcat Hills fields. During 1959 the Oil and Gas Conservation Board designated 23 new gas fields.

Changes to Statutes affecting the administration of Crown Minerals were made at the 1960 Session of the Legislature. Among the amendments made to The Oil and Gas Conservation Act was the addition of a new Part VIA which deals with oil sands. This provides that before an operator can proceed with any scheme to recover oil or other crude hydrocarbon from oil sands, such scheme must have the approval of the Oil and Gas Conservation Board. Authority is given to make regulations or special orders governing operations to recover such products and to exclude oil sands operations from other provisions of the Act.

A new Section 5 of The Gas Resources Preservation Act enables transporters of gas or persons obtaining leave of the Board to apply to the Oil and Gas Conservation Board for a permit to remove gas from the Province. Section 24 subsection (1) is amended to enable the Lieutenant Governor in Council to authorize on a temporary basis, the removal of special hydrocarbons by pipe line.

The Mineral Titles Redemption Act was amended by being extended to March 31, 1961.

A separate report is issued yearly by the Mines Division and may be obtained from the Mines Division of this Department in the Natural Resources Building, Edmonton, Alberta.

Detailed reports of the other divisions follow.

All of which is respectfully submitted.

H. H. SOMERVILLE,
Deputy Minister.

November 15, 1960.

MINERAL RIGHTS DIVISION

Report of the Director of Mineral Rights
J. W. PATRICK

The eleventh year of administration by the Department of Mines and Minerals was again an active year.

Footage drilled for petroleum and natural gas during 1959 was 8,809,544 feet. This was a decrease of 307,168 feet from 1958. The production of crude oil increased to 129,967,312 barrels being an increase of 16,689,465 barrels from 1958. The number of producing wells increased from 8,550 to 9,216 and were capable of maintaining an average daily rate of production of 838,000 barrels at December 31, 1959, under good production practice in accordance with sound engineering and economic principles. Because of inadequate markets the average daily oil produced during the year was only 356,075 barrels, an increase of fifteen percent from the previous year. There were 1,727 licences issued to drill for oil or gas during 1959 compared with 1,726 licences during the previous year.

Production of coal in Alberta in 1959 increased by 29,578 tons.

The production and value of Alberta's chief minerals for 1959 were crude oil, 129,967,312 barrels valued at \$306,504,298.00; coal, 2,549,517 tons valued at \$12,892,747.00; natural gas,* 277,360,324 Mcf., valued at \$22,188,825.92; and salt, 37,523 tons valued at \$1,372,933.00.

Mineral rights, solid, liquid and gaseous, the property of the Crown in right of the Province, are not sold, but are disposed of by lease, reservation, licence, permit or other agreement for limited periods of time. Revenue is obtained from fees, rentals, bonuses, royalties, sales of leases and other miscellaneous charges. During the fiscal year these sources provided a revenue of \$142,238,703.32 being an increase of \$32,619,477.51 from the previous year. Sales of leases and reservations in Crown Reserves were held on four occasions in the fiscal year and the revenue from this source increased 26 million dollars.

The Province is divided into two mining districts; the Edmonton district comprises that portion of the Province lying to the north of the north boundary of Township 42 and the balance of the Province lying to the south is contained in the Calgary district.

During the year 4,719 applications for mineral rights were filed at the office of the Mining Recorders in Edmonton and Calgary and at the office of the Department in Edmonton. Many inquiries were made as to the availability of mineral rights, mostly for petroleum and natural gas leases and reservations by personal application and by correspondence.

A tabulation of leases together with statements of business transacted follow.

* Includes only marketed and consumed gas.

DEPARTMENT OF MINES AND MINERALS

MINERAL RIGHTS LEASES

Type of Lease

	Active at April 1, 1959	Issued					Active at April 1, 1959					Active at March 31, 1960
Petroleum and Natural Gas	29,203	4,121	59	241	2,775	41	30,813					
Natural Gas	392	72	3	3	467	4						
Petroleum	2	2										
Coal	482	15										
Road Allowance Coal	144	12										
Quarrying	65	23										
Salt	2	1										
Bituminous Sands	17	14										
Iron	2	1										
Miscellaneous	5	1										
TOTAL	30,819	4,260	59	244	2,848	46	31,988					

ACREAGE CONTAINED IN ABOVE LEASES

Type of Lease

	Active at April 1, 1959	Issued	Reinstated	Cancelled	Renewed		Active at March 31, 1960
Petroleum and Natural Gas	25,244,850	6,340,679	39,636	3,673,670	7,841	27,943,654	
Natural Gas	1,763,723	268,011	.....	640	.....	2,031,094	
Petroleum	25,272	4,799	.....	.....	.....	30,071	
Coal	147,495	2,574	.....	7,109	162	142,798	
Quarrying	12,679	2,545	.....	613	.....	14,611	
Salt	1,204	.....	.....	.....	.....	1,204	
Bituminous Sands	238,096	479,756	.....	.....	.....	717,852	
Iron	442	.....	.....	.....	.....	442	
Miscellaneous	3,740	66	.....	.....	.....	3,806	
TOTAL	27,437,501	7,098,430	39,636	3,682,032	8,003	30,885,532	

STATEMENT OF BUSINESS TRANSACTED 1959-1960

PETROLEUM AND NATURAL GAS

	Number	Acres
Leases issued	4,121	6,340,679
Leases cancelled and relinquished	2,775	3,673,670
Leases reinstated	59	39,636
Prospecting reservations granted	274	13,384,126
Prospecting reservations terminated	323	16,407,032
Crown reserve drilling reservations granted	144	1,073,412
Crown reserve drilling reservations terminated	145	1,049,689
Natural gas licences issued	80	599,449
Natural gas licences terminated	28	319,821
Crown reserve natural gas licences issued	19	384,333
Crown reserve natural gas licences terminated	12	244,156
Natural gas leases issued	72	268,011
Natural gas leases cancelled and relinquished	Nil	640
Petroleum leases issued	2	4,799
Fees, rentals, penalties and bonuses collected	\$ 32,681,663.73	
Royalties collected	27,327,144.08	
Crown reserve sales	81,322,977.17	
TOTAL	\$141,331,784.93	

MINERAL RIGHTS DIVISION

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COAL

	Number	Acres
Leases issued	15	2,574
Leases cancelled and relinquished	45	7,109
Road Allowance Leases —		
Leases issued	12	
Leases cancelled and relinquished	19	
Fees and rentals collected	\$ 59,705.73	
Royalties collected	90,303.44	
TOTAL		\$150,009.17

QUARRYING

	Number	Acres
Quarrying leases issued	23	2,545
Quarrying leases, cancelled and relinquished	9	613
Fees and rentals collected	\$ 165.00	
Royalties collected	59,273.99	
TOTAL		\$59,438.99

MISCELLANEOUS

	Number
Bituminous sands leases issued	14
Bituminous sands permits issued	14
Bituminous sands permits terminated	31
Quartz—	
Certificates of Work issued	71
Power of Attorney filed	1
Placer—	
Claims recorded	7
Renewals issued	42
Powers of Attorney filed	6
Special Mineral leases issued	1
Sodium Sulphate prospecting permits issued	1
Mineral sales	8
Well licences issued	2,008
Geophysical licenses issued	130
Permits to operate geophysical equipment issued	15
Permits to operate geophysical equipment renewed	67
Fees, rentals, royalties and miscellaneous charges	\$697,470.23

PETROLEUM AND NATURAL GAS

Leases — During the year 4,121 petroleum and natural gas leases were granted covering 6,340,679 acres and at the close of the fiscal year a total of 30,813 leases were in existence comprising an area of 27,943,654 acres.

The revenue received from fees amounted to \$36,580.00. The revenue from lease rentals was \$23,992,354.80 and the revenue from bonuses accepted by the Mining Recorders at sales of petroleum and natural gas leases by tender amounted to \$229,856.48. The revenue from penalties for deferment of drilling on petroleum and natural gas leases amounted to \$31,300.00.

Disposal of Crown Reserves — Petroleum and natural gas rights comprised in Crown reserves may be disposed of by order of the Lieutenant Governor in Council and during the year 209 leases, nine reservations, 144 Crown reserve drilling reservations and nineteen Crown reserve natural gas licences were purchased and particulars of these Crown reserve purchases are included in this report. Particulars of Crown reserve fractional area leases purchased and Crown reserve natural gas leases purchased pursuant to Sections 280 and 282 of The Mines and Minerals Act are also included.

DEPARTMENT OF MINES AND MINERALS

CROWN RESERVES PURCHASED IN CARNWOOD AREA

Description		Offer Accepted From:	Cash	Purchase Price
Sec.	5-48- 5-5	Supertest Petroleum Corporation Limited	\$	76,200.00
			\$	76,200.00

CROWN RESERVES PURCHASED IN CARSON CREEK NORTH AREA

Description		Offer Accepted From:	Cash	Purchase Price
S. ¹ / ₂	26-61-12-5	Mobil Oil of Canada, Ltd.	\$	51,377.77
E. ¹ / ₂	34-61-12-5	Mobil Oil of Canada, Ltd.		325,377.77
E. ¹ / ₂	3-62-12-5	Pan American Petroleum Corporation		464,126.10
N. ¹ / ₂	11-62-12-5	Pan American Petroleum Corporation		161,111.11
			\$	1,001,992.75

CROWN RESERVES PURCHASED IN FAIRYDELL-BON ACCORD AREA

Description		Offer Accepted From:	Cash	Purchase Price
All	6-58-24-4 (Except gas in Viking Zone)	Champlin Oil & Refining Co.	\$	19,840.00
			\$	19,840.00

CROWN RESERVES PURCHASED IN GILBY AREA

Description		Offer Accepted From:	Cash	Purchase Price
E. ¹ / ₂	34-40- 2-5	Dome Petroleum Limited	\$	21,407.77
N. ¹ / ₂	4-41- 2-5	Ranger Oil (Canada) Limited		10,000.00
N.W. ¹ / ₄	6-41- 2-5	Richfield Oil Corporation		39,000.00
N.E. ¹ / ₄	1-41- 3-5	Canadian Homestead Oils Limited		45,131.00
N.E. ¹ / ₄	32-40- 3-5	Richfield Oil Corporation		45,321.67
N. ¹ / ₂	10-41- 3-5	Canadian Homestead Oils Limited		72,640.00
S.E. ¹ / ₄	10-41- 3-5	Western Decalta Petroleum Limited and Spruce Hills Production Company, Inc.		53,498.00
S. ¹ / ₂	11-41- 3-5	Canadian Homestead Oils Limited		59,200.00
			\$	346,198.44

CROWN RESERVES PURCHASED IN HARMATTAN EAST AREA

Description		Offer Accepted From:	Cash	Purchase Price
E. ¹ / ₂	6-32- 3-5	Shell Oil Company of Canada, Limited and Canadian Superior Oil of California, Ltd.	\$	826,561.11
S.W. ¹ / ₄	6-32- 3-5	Shell Oil Company of Canada, Limited and Canadian Superior Oil of California, Ltd.		307,999.89
			\$	1,134,561.00

CROWN RESERVES PURCHASED IN HOMEGLEN-RIMBEY AREA

Description		Offer Accepted From:	Cash	Purchase Price
E. ¹ / ₂	6-43- 1-5	Shell Oil Company of Canada, Limited	\$	253,767.11
			\$	253,767.11

CROWN RESERVES PURCHASED IN JOFFRE AREA

Description		Offer Accepted From:	Cash	Purchase Price
W. ¹ / ₂	6-38-24-4	Mayfair Oil and Gas Ltd.	\$	11,002.00
W. ¹ / ₂	14-39-26-4	Ranger Oil (Canada) Limited		5,000.00
E. ¹ / ₂	32-39-26-4	Ranger Oil (Canada) Limited		10,000.00
			\$	26,002.00

MINERAL RIGHTS DIVISION

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CROWN RESERVES PURCHASED IN JUDY CREEK AREA

Description		Offer Accepted From:	Cash Purchase Price
N.1/2	18-64-10-5	Western Decalta Petroleum Limited and Stanwell Oil and Gas Limited	\$ 54,189.00
E.1/2	23-63-11-5	Imperial Oil Limited	671,927.36
W.1/2	23-63-11-5	Imperial Oil Limited	702,141.64
E.1/2	27-63-11-5	Imperial Oil Limited	702,161.11
W.1/2	27-63-11-5	Imperial Oil Limited	646,762.37
W.1/2	34-63-11-5	Imperial Oil Limited	702,135.73
W.1/2	3-64-11-5	Imperial Oil Limited	702,153.37
W.1/2	10-64-11-5	Imperial Oil Limited	732,261.29
E.1/2	13-64-11-5	Montreal Trust Company and J. Ray McDermott and Co. Inc.	122,750.00
W.1/2	13-64-11-5	Imperial Oil Limited	501,463.36
E.1/2	14-64-11-5	Montreal Trust Company and J. Ray McDermott and Co. Inc.	703,777.00
W.1/2	14-64-11-5	Pan American Petroleum Corporation	704,113.13
			\$ 6,945,835.36

CROWN RESERVES PURCHASED IN KAYBOB AREA

Description		Offer Accepted From:	Cash Purchase Price
E.1/2	27-64-19-5	The Atlantic Refining Company	152,000.00
W.1/2	27-64-19-5	Champlin Oil and Refining Co.	205,209.99
E.1/2	28-64-19-5	Champlin Oil & Refining Co.	205,209.99
W.1/2	28-64-19-5	Sohio Petroleum Company	143,775.00
E.1/2	21-63-19-5	The Atlantic Refining Company	\$ 115,101.00
E.1/2	22-63-19-5	Shell Oil Company of Canada, Limited	253,555.88
W.1/2	22-63-19-5	Hudson's Bay Oil and Gas Company Limited	203,000.60
E.1/2	23-63-19-5	North Star Oil Limited and DeKalb Petroleum Corporation	63,847.00
W.1/2	23-63-19-5	Shell Oil Company of Canada, Limited	253,555.88
E.1/2 20 and W.1/2	21-63-19-5	The Atlantic Refining Company	353,334.00
			\$ 1,953,589.34

CROWN RESERVES PURCHASED IN KEYSTONE AREA

Description		Offer Accepted From:	Cash Purchase Price
S.W.1/4	9-48- 4-5	Canada-Cities Service Petroleum Corporation	\$ 5,775.00
W.1/2	25-48- 5-5	Dynamic Petroleum Products Ltd.	23,351.00
W.1/2	16-49- 5-5	DeKalb Petroleum Corporation and Cree Oil of Canada (1958) Limited	67,560.00
W.1/2	21-49- 5-5	Spruce Hills Production Company Inc. and Western Decalta Petroleum Limited	26,960.00
All	34-47- 3-5	Whitehall Canadian Oils Ltd., Westburne Oil Development Limited, Tricentrol Oils Limited and Abilene Oil Enterprises Ltd.	55,000.00
S.1/2 and N.W.1/4	4-48- 3-5	Whitehall Canadian Oils Ltd., Westburne Oil Development Limited, Tricentrol Oils Limited and Abilene Oil Enterprises Ltd.	25,500.00
S.1/2	16-48- 3-5	Hudson's Bay Oil and Gas Company Limited	75,209.60
S.1/2 and N.W.1/4	20-48- 3-5	Whitehall Canadian Oils Ltd., Westburne Oil Development Limited, Tricentrol Oils Limited and Abilene Oil Enterprises Ltd.	25,000.00
N.E.1/4	26-48- 5-5	Crusade Petroleum Corporation Limited	12,502.00
N.1/2	5-49- 5-5	Landmark Oils Limited	59,670.00
N.1/2 6-49- 5-5 & N.E.1/4	1-49- 6-5	Landmark Oils Limited	89,510.00
			\$ 466,037.60

CROWN RESERVES PURCHASED IN NAMAO AREA

Description		Offer Accepted From:	Cash Purchase Price
S.E.1/4	6-55-24-4 (Except Natural Gas in Blairmore Zone)	Dominion Leaseholds Ltd., Canadian Chieftain Petroleums Ltd. and Tidal Petroleum Corporation Ltd.	\$ 1,680.00
			\$ 1,680.00

CROWN RESERVES PURCHASED IN NEVIS AREA

Description		Offer Accepted From:	Cash Purchase Price
All	34-38-22-4	American Climax Petroleum Corporation	\$ 211,121.00
All	36-38-22-4	Home Oil Company Limited, Tennessee Gas Transmission Company and United Oils, Limited	8,100.00
			\$ 219,221.00

DEPARTMENT OF MINES AND MINERALS

CROWN RESERVES PURCHASED IN NORMANDVILLE AREA

Description		Offer Accepted From:	Cash Purchase Price
N.E. $\frac{1}{4}$	5-79-22-5	Alexandra Petroleum Ltd.	\$ 2,095.95
N.W. $\frac{1}{4}$	5-79-22-5	Alexandra Petroleum Ltd.	3,059.95
N.E. $\frac{1}{4}$	6-79-22-5	Canadian Homestead Oils Limited	8,800.00
			\$ 13,955.90

CROWN RESERVES PURCHASED IN PEMBINA AREA

Description		Offer Accepted From:	Cash Purchase Price
All 32-47- 6-5 and S. $\frac{1}{2}$ 5-48- 6-5		Skelly Oil Company	\$ 228,480.00
W. $\frac{1}{2}$ 30 & N. $\frac{1}{2}$ & S.W. $\frac{1}{4}$ 31-49- 6-5		Consolidated Mic Mac Oils Ltd., Mayfair Oil & Gas Ltd. and Ashland Oil & Refining Company	400,101.00
N. $\frac{1}{2}$ 32 and N. $\frac{1}{2}$ 33-49- 6-5		West Canadian Oil & Gas Limited	411,340.00
All 14 and N. $\frac{1}{2}$ 15-50-10-5		Sheldon Petroleum Ltd.	54,982.95
All 7-49- 5-5		North Star Oil Limited and DeKalb Petroleum Corporation	411,847.00
All 17-49- 5-5		Northern Natural Gas Producing Company	375,724.80
All 18-49- 5-5		North Star Oil Limited and DeKalb Petroleum Corporation	416,847.00
All 12-49- 6-5		North Star Oil Limited and DeKalb Petroleum Corporation	403,847.00
All 25-49- 7-5		Sun Oil Company	128,560.00
All 36-49- 7-5		Canada-Cities Service Petroleum Corporation	311,113.00
N. $\frac{1}{2}$ and S.E. $\frac{1}{4}$ 1--50- 7-5		Texfex Petroleum Corporation and Ceepée Oil Company Limited	275,061.10
S. $\frac{1}{2}$ and N.W. $\frac{1}{4}$ 2-50- 7-5		Pacific Petroleum Ltd.	480,480.00
All 22-48- 6-5		Champlin Oil & Refining Co.	331,131.17
All 27-48- 6-5		DeKalb Petroleum Corporation	223,000.00
W. $\frac{1}{2}$ 6 & 7-47- 8-5		Skelly Oil Company	56,102.40
N. $\frac{1}{2}$ s 35 & 36-46- 9-5		Dea Oil of Canada Ltd.	102,136.24
S.E. $\frac{1}{4}$ 11-50- 9-5		Canada-Cities Service Petroleum Corporation and Pan American Petroleum Corporation	11,181.00
N. $\frac{1}{2}$ & S.E. $\frac{1}{4}$ 12-50- 9-5		Canada-Cities Service Petroleum Corporation and Pan American Petroleum Corporation	113,760.00
All 33 & W. $\frac{1}{2}$ 34-49- 7-5		Pan American Petroleum Corporation and Canada-Cities Service Petroleum Corporation	388,395.00
All 6-50- 7-5		Skelly Oil Company	298,662.40
E. $\frac{1}{2}$ 4-50- 8-5		Skelly Oil Company	212,664.54
W. $\frac{1}{2}$ 6-50- 8-5		DeKalb Petroleum Corporation	33,000.00
W. $\frac{1}{2}$ 7-50- 8-5		DeKalb Petroleum Corporation	114,000.00
All 9-50- 8-5		Skelly Oil Company	298,662.40
N. $\frac{1}{2}$ 10 & S. $\frac{1}{2}$ 15-50- 8-5		DeKalb Petroleum Corporation	267,000.00
All 16-50- 8-5		DeKalb Petroleum Corporation	272,000.00
			\$ 6,620,079.00

CROWN RESERVES PURCHASED IN RED EARTH AREA

Description		Offer Accepted From:	Cash Purchase Price
S.E. $\frac{1}{4}$	8-87- 8-5	Whitehall Canadian Oils Ltd., Fort St. John Petroleum Ltd., (Non-Personal Liability), Westburne Oil Development Limited and Abilene Oil Enterprises Ltd.	\$ 4,500.00
N.E. $\frac{1}{4}$ 20 & All 29-87- 8-5		Dome Petroleum Limited	88,077.77
All 28-87- 8-5		Dome Petroleum Limited	64,177.77
All 30-87- 8-5		DeKalb Petroleum Corporation and Cree Oil of Canada (1958) Limited	56,600.00
			\$ 213,355.54

CROWN RESERVES PURCHASED IN STURGEON LAKE AREA

Description		Offer Accepted From:	Cash Purchase Price
All 7-72-23-5		Sohio Petroleum Company and United Producing Company, Inc.	\$ 9,632.00
All 12-72-24-5		Colorado Oil and Gas Ltd.	11,208.63
			\$ 20,835.63

MINERAL RIGHTS DIVISION

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CROWN RESERVES PURCHASED IN SUNDRE AREA

Description	Offer Accepted From:	Cash Purchase Price
All 15-34- 5-5	Canadian Homestead Oils Limited, William Lester McKnight and Bryan Watson Payne	\$ 118,422.00
All 21-34- 5-5	Altana Exploration Company	71,140.00
		\$ 189,562.00

CROWN RESERVES PURCHASED IN SWAN HILLS AREA

Description	Offer Accepted From:	Cash Purchase Price
E 1/2 23-66-10-5	Sohio Petroleum Company	\$ 307,000.00
W 1/2 23-66-10-5	Bailey Selburn Oil & Gas Ltd.	377,537.95
E 1/2 26-66-10-5	Bailey Selburn Oil & Gas Ltd.	377,537.96
W 1/2 26-66-10-5	Sinclair Canada Oil Company	610,610.00
E 1/2 35-66-10-5	Sinclair Canada Oil Company	560,560.00
W 1/2 35-66-10-5	Sinclair Canada Oil Company	701,701.00
E 1/2 5-67-10-5	Canadian Kewanee Limited	1,461,001.00
W 1/2 5-67-10-5	The British American Oil Company Limited	1,200,055.55
E 1/2 8-67-10-5	Home Oil Company Limited, French Petroleum Company of Canada Ltd., Kern County Land Company and United Oils, Limited	
		\$ 1,276,200.00
W 1/2 8-67-10-5	The British American Oil Company Limited	1,265,055.55
E 1/2 15-67-10-5	Home Oil Company Limited, French Petroleum Company of Canada Ltd., Kern County Land Company and United Oils, Limited	
		1,176,200.00
W 1/2 15-67-10-5	Canadian Kewanee Limited, C. L. McMahon, Inc., Schermerhorn Oil Corporation and Kenwood Oil Company	
		1,301,211.21
E 1/2 22-67-10-5	Mobil Oil of Canada, Ltd.	661,222.22
W 1/2 22-67-10-5	The Atlantic Refining Company	702,000.00
E 1/2 27-67-10-5	Mobil Oil of Canada, Ltd.	661,222.22
W 1/2 27-67-10-5	Canadian Kewanee Limited, C. L. McMahon, Inc., Schermerhorn Oil Corporation and Kenwood Oil Company	
All 14-66-10-5	Bailey Selburn Oil & Gas Ltd., Anglo American Exploration Ltd. and The Crow's Nest Pass Coal Company Limited	1,005,711.11
N 1/2 15-66-10-5	J. Ray McDermott & Co., Inc.	425,000.00
N 1/2 16-66-10-5	Pan American Petroleum Corporation and The British American Oil Company Limited	247,000.00
N 1/2 17-66-10-5	Pan American Petroleum Corporation and The British American Oil Company Limited	960,111.11
E 1/2 19-66-10-5	Pan American Petroleum Corporation and The British American Oil Company Limited	\$ 1,351,111.11
W 1/2 19-66-10-5	Pan American Petroleum Corporation and The British American Oil Company Limited	1,281,111.11
E 1/2 30-66-10-5	Pan American Petroleum Corporation and The British American Oil Company Limited	960,111.11
W 1/2 30-66-10-5	Pan American Petroleum Corporation and The British American Oil Company Limited	1,281,111.11
E 1/2 31-66-10-15	Pan American Petroleum Corporation and The British American Oil Company Limited	800,111.11
W 1/2 31-66-10-5	Pan American Petroleum Corporation and The British American Oil Company Limited	1,281,111.11
W 1/2 14-67-10-5	Mobil Oil of Canada Ltd	640,111.11
W 1/2 23-67-10-5	Mobil Oil of Canada Ltd	751,751.77
W 1/2 26-67-10-5	Plymouth Oil Company	751,751.77
S 1/2 15-66-10-5	French Petroleum Company of Canada Ltd	435,200.00
S 1/2 16-66-10-5	French Petroleum Company of Canada Ltd.	167,278.78
		779,278.78
		\$ 25,756,975.75

CROWN RESERVES PURCHASED IN VIRGINIA HILLS AREA

Description	Offer Accepted From:	Cash Purchase Price
All 8-65-13-5	Shell Oil Company of Canada, Limited Hudson's Bay Oil and Gas Company Limited, Union Oil Company of California and Home Oil Company Limited	751,751.77
All 9-65-13-5	Shell Oil Company of Canada, Limited Hudson's Bay Oil and Gas Company Limited, Union Oil Company of California and Home Oil Company Limited	451,916.80
All 10-65-13-5	Shell Oil Company of Canada, Limited Hudson's Bay Oil and Gas Company Limited, Union Oil Company of California and Home Oil Company Limited	851,916.80
E 1/2 13-65-14-5	The Atlantic Refining Company and Skelly Oil Company	851,916.80
E 1/2 24-65-14-5	The Atlantic Refining Company and Skelly Oil Company	251,000.00
		853,834.00
		\$ 2,760,084.40

CROWN RESERVES PURCHASED IN WILLESDEN GREEN AREA

Description		Offer Accepted From:	Cash Purchase Price
All	27-42- 6-5	Canadian Homestead Oils Limited	\$ 126,600.00
E. ^{1/2}	28-42- 6-5	Canadian Homestead Oils Limited	86,920.00
W. ^{1/2}	34-42- 6-5	Midwest Oil Corporation and Peerless Oil and Gas Company	44,138.00
			<hr/>
			\$ 257,658.00

CROWN RESERVES PURCHASED ELSEWHERE IN ALBERTA

Description		Offer Accepted From:	Cash Purchase Price
All	14-41-12-4	Richfield Oil Corporation	\$ 138,500.00
All	32-41-13-4	Canadian Homestead Oils Limited	7,650.00
W. ^{1/2}	18-37-22-4	Sun Oil Company	8,403.20
N.W. ^{1/4} &			
L.S.	6-33-43-22-4	Hunt Oil Company	5,500.00
S.W. ^{1/4}	34-43-22-4	Union Oil Company of California	9,600.00
N. ^{1/2}	14-37-23-4	The British American Oil Company Limited	12,835.55
All	24-37-23-4	The British American Oil Company Limited	32,102.95
All	22- 3-28-4	Shell Oil Company of Canada, Limited	23,676.33
N. ^{1/2} &			
S.E. ^{1/4}	28- 3-28-4	Shell Oil Company of Canada, Limited	18,676.99
N.E. ^{1/4}	34-35- 1-5	Canada-Cities Service Petroleum Corporation	21,812.00
S. ^{1/4}	2-36- 1-5	Canada-Cities Service Petroleum Corporation	37,201.00
N.W. ^{1/4}	4-36- 1-5	West Canadian Oil & Gas Limited and Imperial Oil Limited	16,024.00
All	16-38-18-4	Union Oil and Gas Corporation of Louisiana	16,096.00
N. ^{1/2} 4 &			
S. ^{1/2}	9-16-20-4	Plymouth Oil Company	11,654.40
All	12-16-21-4	Plymouth Oil Company	11,654.40
All	22-44-21-4	Pan American Petroleum Corporation	6,470.40
N.E. ^{1/4}	26-44-21-4	Pan American Petroleum Corporation	1,617.60
W. ^{1/2}	22-38-23-4	Sohio Petroleum Company and United Producing Company, Inc.	5,539.20
All	6-36-25-4	Honolulu Oil Corporation	45,113.00
N.E. ^{1/4}	26-34-26-4	Imperial Oil Limited	9,636.11
W. ^{1/2}	16-20-29-4	Canadian Oil Companies, Limited and Security Freehold Petroleum Limited	6,745.60
All	10-27- 1-5	Shell Oil Company of Canada, Limited	45,511.11
All	2-27- 2-5	Shell Oil Company of Canada, Limited	55,777.77
E. ^{1/2}	12-27- 2-5	Shell Oil Company of Canada, Limited	45,511.11
S.W. ^{1/4} 26 &			
S.E. ^{1/4}	27-50- 7-5	Columbus Minerals Ltd.	5,000.00
(Except Natural Gas in Glauconitic Sandstone Zone)		North Star Oil Limited and DeKalb Petroleum Corporation	54,864.00
All	28-50- 8-5	French Petroleum Company of Canada Ltd.	19,777.00
W. ^{1/2}	30-50- 8-5	Imperial Oil Limited	452,810.00
E. ^{1/2}	19-63-10-5	Imperial Oil Limited	501,090.00
W. ^{1/2}	19-63-10-5	Imperial Oil Limited	600,780.00
W. ^{1/2}	33-63-10-5	Imperial Oil Limited	600,780.00
W. ^{1/2}	4-64-10-5	North Star Oil Limited and DeKalb Petroleum Corporation	115,848.00
W. ^{1/2}	9-64-10-5	Whitehall Canadian Oils Ltd., Westburne Oil Development Limited and Fort St. John Petroleum Ltd.	150,555.00
S. ^{1/2}	17-64-10-5	J. Ray McDermott & Co., Inc.	357,000.00
S. ^{1/2} &			
N.E. ^{1/4}	18-64-10-5	The California Standard Company and Imperial Oil Limited	16,856.66
S. ^{1/2}	25-41-18-5	The California Standard Company and Imperial Oil Limited	6,426.66
S. ^{1/2}	26-41-18-5	Texaco Exploration Company	11,011.00
E. ^{1/2}	36-41-18-5	Western Decalta Petroleum Limited	
All	20-64-26-5	Sohio Petroleum Company, Cree Oil of Canada (1958) Limited, Canadian Export Gas & Oil Ltd., Canpet Exploration Ltd. and Altana Exploration Company.	76,587.00
All	13-64-27-5	Western Decalta Petroleum Limited, Sohio Petroleum Company, Cree Oil of Canada (1958) Limited, Canadian Export Gas & Oil Ltd., Canpet Exploration Ltd. and Altana Exploration Company.	38,397.00
S. ^{1/2}	30-29-21-4	The California Standard Company	4,481.27
E. ^{1/2}	33-29-21-4	Great Plains Development Company of Canada, Ltd.	5,155.26
W. ^{1/2}	29-48-21-4	The California Standard Company	3,847.47
All	6-49-21-4	The California Standard Company	7,668.69
W. ^{1/2}	24-29-22-4	Dominion Western Oil Corporation Ltd	40,873.60
N.E. ^{1/4}	26-29-22-4		
(Except Natural Gas In Glauconitic Sandstone Zone)		Dominion Western Oil Corporation Ltd.	12,177.60
W. ^{1/2}	36-29-22-4	Dominion Western Oil Corporation Ltd.	24,355.20
N. ^{1/2}	12-56-22-4	The California Standard Company	3,876.67

MINERAL RIGHTS DIVISION

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CROWN RESERVES PURCHASED ELSEWHERE IN ALBERTA
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
All 4-40-23-4 (Except Gas in Basal Quartz Sandstone Zone)	Ambassador Oil Corporation	7,041.00
Those portions of the W 1/2 30-43-23-4 Outside Samson Indian Reserve No. 137.	Dome Petroleum Limited, Supertest Petroleum Corporation Limited and William L. McKnight	3,077.00
All 20-30- 1-5 (Except Natural Gas in Wabamun Zone)	Shell Oil Company of Canada, Limited	16,555.88
All 29-30- 1-5 (Except Natural Gas in Wabamun Zone)	Shell Oil Company of Canada, Limited	9,777.77
All 30-30- 1-5 (Except Natural Gas in Wabamun Zone)	Shell Oil Company of Canada, Limited	9,777.77
W 1/2 20-63-10-5	The Atlantic Refining Company	415,015.16
E 1/2 20-63-10-5	Imperial Oil Limited	402,126.66
W 1/2 28-63-10-5	Imperial Oil Limited	501,643.43
W 1/2 24-63-11-5	Imperial Oil Limited	531,244.44
E 1/2 24-63-11-5	Imperial Oil Limited	531,123.25
E 1/2 34-63-11-5	Imperial Oil Limited	531,623.23
E 1/2 34-64-11-5	Imperial Oil Limited	642,145.45
E 1/2 10-64-11-5	Imperial Oil Limited	641,644.44
All 23-64-13-5	Shell Oil Company of Canada, Limited	165,555.89
N.E. 1/4 15-29-19-4	Altair Oil & Gas Co.	1,920.00
S.E. 1/4 3-30-26-4	Dominion Western Oil Corporation Ltd.	5,617.00
S. 1/4 & N.W. 1/4 4-30-26-4	Dominion Western Oil Corporation Ltd	12,010.00
S. 1/4 & N.W. 1/4 24-26- 4-5	Sun Oil Company	6,916.80
N.E. 1/4 26-26- 4-5	Sun Oil Company	2,305.60
N. 1/4 15-48- 5-5	French Petroleum Company of Canada Ltd.	7,273.78
S. 1/4 22-48- 5-5	French Petroleum Company of Canada Ltd.	7,278.78
E. 1/2 19-50- 9-5	Texaco Exploration Company	65,520.00
All 29-68-10-5	Canadian Kewanee Limited	501,211.00
All 32-68-10-5	Canadian Kewanee Limited	701,211.00
All 18-69-10-5	Canadian Kewanee Limited	101,001.00
S.W. 1/4 1 & S. 1/2 2-69-11-5	Canadian Kewanee Limited	151,111.00
E. 1/2 13 & S.E. 1/4 24-69-11-5	Canadian Kewanee Limited	56,001.00
W. 1/2 24-64-13-5	Shell Oil Company of Canada, Limited	27,101.11
E. 1/2 25-64-13-5	Shell Oil Company of Canada, Limited	102,739.89
E. 1/2 36-64-13-5	Shell Oil Company of Canada, Limited	205,001.01
		\$ 10,219,162.24

PETROLEUM AND NATURAL GAS RESERVATIONS PURCHASED IN PROVINCIAL RESERVES

Description	Offer Accepted From:	Cash Purchase Price
Comprising 92,160 acres in townships 75 and 76, ranges 4 and 5, west of the 5th meridian and located in Marten Hills Provincial Reserve.	Imperial Oil Limited	\$ 310,033.00
Comprising 92,160 acres in townships 56 and 57, ranges 3 and 4, west of the 6th meridian and located in Smoky River Provincial Reserve.	Mobil Oil of Canada Ltd. and Imperial Oil Limited	250,768.00
Comprising 92,160 acres in townships 56 and 57, ranges 5 and 6, west of the 6th meridian and located in Smoky River Provincial Reserve	Shell Apache Exploration Limited	1,103,787.77
Comprising 20,000 acres in township 3, range 12, west of the 4th meridian and located in Lucky Strike Provincial Reserve.	Home Oil Company	26,161.00
Comprising 19,680 acres in townships 27 and 28, range 16, west of the 4th meridian and located in Dorothy Provincial Reserve.	Canadian Kewanee Limited	526,526.26

**PETROLEUM AND NATURAL GAS RESERVATIONS PURCHASED
IN PROVINCIAL RESERVES**
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 43,645 acres in townships 39 and 40, range 7, west of the 5th meridian and located in Alhambra Provincial Reserve.	Texas Pacific Coal and Oil Company The Pure Oil Company and Bailey Selburn Oil & Gas Ltd.	2,620,882.25
Comprising 38,400 acres in townships 51 and 52, range 10, west of the 5th meridian and located in Cynthia Provincial Reserve.	Texaco Exploration Company	521,424.17
Comprising 69,944 acres in townships 84 and 85, ranges 7 and 8, west of the 6th meridian and located in Clear Hills Provincial Reserve.	Hudson's Bay Oil and Gas Company Limited	421,762.32
Comprising 54,960 acres in townships 83, 84 and 85, ranges 9 and 10, west of the 6th meridian and located in Clear Hills Provincial Reserve.	Hudson's Bay Oil and Gas Company Limited and Union Oil Company of California	386,368.80
		<hr/> \$ 6,167,731.57

CROWN RESERVE DRILLING RESERVATIONS PURCHASED

Description	Offer Accepted From:	Cash Purchase Price
Comprising 6,200 acres in township 45, ranges 6 and 7, west of the 4th meridian - Devonian system - nine quarter sections.	Midwest Oil Corporation	\$ 12,524.00
Comprising 4,480 acres in townships 46 and 47, ranges 12 and 13, west of the 4th meridian - Basal Blairmore member of the Blairmore formation - six quarter sections.	David Daniel Feldman	6,164.80
Comprising 4,640 acres in townships 44 and 45, ranges 14 and 15, west of the 4th meridian - Wabamun group - seven quarter sections.	Sohio Petroleum Company	33,600.00
Comprising 4,640 acres in townships 44 and 45, range 15, west of the 4th meridian - Wabamun group - seven quarter sections.	Sohio Petroleum Company	33,600.00
Comprising 5,766 acres in townships 8 and 9, ranges 16 and 17, west of the 4th meridian - Rundle group - eight quarter sections.	Texaco Exploration Company	31,755.55
Comprising 6,400 acres in townships 38 and 39, ranges 16 and 17, west of the 4th meridian - Leduc formation of the Woodbend group - nine quarter sections.	Canadian Superior Oil of California, Ltd., Canadian Oil Companies, Limited and The Calgary & Edmonton Corporation Limited.	29,150.00
Comprising 5,760 acres in townships 40 and 41, ranges 16 and 17, west of the 4th meridian - Paleozoic sediments - eight quarter sections.	Whitehall Canadian Oils Ltd.	30,865.00
Comprising 6,400 acres in townships 28 and 29, range 19, west of the 4th meridian - Leduc formation of the Woodbend group - ten quarter sections.	Kerr-McGee Oil Industries Inc.	48,320.00
Comprising 6,440 acres in townships 30 and 31, ranges 21 and 22, west of the 4th meridian - Mississippian age - nine quarter sections.	McAlester Canadian Oil Company	78,696.80
Comprising 6,560 acres in townships 31 and 32, range 22, west of the 4th meridian - Mississippian age - nine quarter sections.	Union Oil and Gas Corporation of Louisiana	72,518.40
Comprising 9,120 acres in townships 36 and 37, ranges 24 and 25, west of the 4th meridian - Elk Point group - fourteen quarter sections.	Central-Del Rio Oils Limited	91,755.99

MINERAL RIGHTS DIVISION

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CROWN RESERVE DRILLING RESERVATIONS PURCHASED
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 7,360 acres in townships 44 and 45, ranges 26 and 27, west of the 4th meridian — Leduc formation of the Woodbend group — ten quarter sections.	Sohio Petroleum Company	82,000.00
Comprising 6,720 acres in townships 45 and 46, ranges 27 and 28, west of the 4th meridian — Woodbend group — ten quarter sections.	Pan American Petroleum Corporation	126,000.00
Comprising 5,120 acres in townships 60 and 61, range 1, west of the 5th meridian — Wabamun group — seven quarter sections.	Union Oil Company of California	52,000.00
Comprising 4,960 acres in townships 60 and 61, range 2, west of the 5th meridian — Wabamun group—seven quarter sections.	Union Oil Company of California	36,000.00
Comprising 6,720 acres in townships 47 and 48, ranges 4 and 5, west of the 5th meridian — Mississippian age — ten quarter sections.	Pan American Petroleum Corporation	70,627.20
Comprising 7,360 acres in townships 47 and 48, ranges 5 and 6, west of the 5th meridian — Mississippian age —ten quarter sections.	Champlin Oil & Refining Co.	357,521.00
Comprising 6,821 acres in township 50, ranges 6 and 7, west of the 5th meridian — Banff formation — ten quarter sections.	Pan American Petroleum Corporation, Canadian Seaboard Oil Company and Pacific Petroleum Ltd.	1,302,682.86
Comprising 8,960 acres in township 69, ranges 9 and 10, west of the 5th meridian — Elk Point group—fourteen quarter sections.	Texaco Canada Limited, Consolidated Mic Mac Oils Ltd. and Mayfair Oil and Gas Ltd.	1,007,000.00
Comprising 8,960 acres in township 69, ranges 10 and 11, west of the 5th meridian — Elk Point group—fourteen quarter sections.	Canadian Keweenee Limited	976,000.00
Comprising 10,880 acres in township 64, ranges 14 and 15, west of the 5th meridian — Gilwood sand of the Elk Point group — sixteen quarter sections.	Sohio Petroleum Company and Canadian Devonian Petroleum Limited	25,600.00
Comprising 10,560 acres in townships 52 and 53, range 18, west of the 5th meridian — Mississippian age—sixteen quarter sections.	Supertest Petroleum Corporation, Limited	6,270.00
Comprising 9,600 acres in townships 68 and 69, ranges 22 and 23, west of the 5th meridian — Leduc formation of the Woodbend group—fourteen quarter sections.	Western Decalta Petroleum Limited, Westburne Oil Development Limited Sohio Petroleum Company and Dome Petroleum Limited	254,950.00
Comprising 6,240 acres in township 29, ranges 2 and 3, west of the 4th meridian — Devonian age — seven quarter sections.	Plymouth Oil Company	8,157.88
Comprising 4,741 acres in townships 44 and 45, ranges 9 and 10, west of the 4th meridian — Paleozoic sediments —six quarter sections.	Canadian Pacific Oil and Gas Limited	7,443.37
Comprising 4,663 acres in townships 40 and 41, ranges 10 and 11, west of the 4th meridian — Paleozoic sediments	Canadian Pacific Oil and Gas Limited	55,316.11
Comprising 5,120 acres in townships 44 and 45, ranges 15 and 16, west of the 4th meridian — Wabamun group—seven quarter sections.	Forum Oil & Gas Ltd.	1,890.00

CROWN RESERVE DRILLING RESERVATIONS PURCHASED
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 6,744 acres in township 37, ranges 16 and 17, west of the 4th meridian — Leduc formation of the Woodbend group — ten quarter sections.	Canadian Superior Oil Company of California, Ltd., Canadian Oil Companies, Limited and Security Freehold Petroleum Limited	11,700.00
Comprising 6,240 acres in townships 30 and 31, ranges 18 and 19, west of the 4th meridian — Mississippian age — nine quarter sections.	Anglo-American Exploration Ltd. and Gridoil Freehold Leases Ltd.	24,465.60
Comprising 5,043 acres in township 33, ranges 23 and 24, west of the 4th meridian — Paleozoic sediments — nine quarter sections.	Sohio Petroleum Company and United Producing Company, Inc.	35,230.00
Comprising 6,080 acres in townships 48 and 49, ranges 24 and 25, west of the 4th meridian — Nisku formation of the Winterburn group—nine quarter sections.	Supertest Petroleum Corporation, Limited	7,625.00
Comprising 7,680 acres in townships 36, 37 and 38, range 27, west of the 4th meridian — Leduc formation of the Woodbend group — eleven quarter sections.	Canadian Fina Oil Limited and Canadian Superior Oil of California, Ltd.	29,920.00
Comprising 7,040 acres in townships 45 and 46, ranges 1 and 2, west of the 5th meridian — Woodbend group—eleven quarter sections.	The California Standard Company	276,779.79
Comprising 7,680 acres in townships 40 and 41, ranges 1, 2 and 3, west of the 5th meridian — Pekisko formation —eleven quarter sections.	French Petroleum Company of Canada Ltd.	52,876.76
Comprising 13,120 acres in townships 7, 8, 9 and 10, range 3, west of the 5th meridian — Rundle group — sixteen quarter sections.	Texaco Exploration Company	67,565.67
Comprising 8,320 acres in townships 37 and 38, ranges 3 and 4, west of the 5th meridian — Pekisko formation—twelve quarter sections.	Union Oil and Gas Corporation of Louisiana	631,000.00
Comprising 9,600 acres in townships 32 and 33, ranges 5 and 6, west of the 5th meridian — Shunda formation of the Rundle group — fourteen quarter sections.	Texaco Exploration Company	106,565.67
Comprising 10,720 acres in townships 35, 36 and 37, ranges 6 and 7, west of the 5th meridian — Mississippian age —sixteen quarter sections.	Hudson's Bay Oil and Gas Company Limited and Imperial Oil Limited	16,402.22
Comprising 10,720 acres in townships 38 and 39, ranges 8, 9 and 10, west of the 5th meridian — Shunda formation of the Rundle group — sixteen quarter sections.	Supertest Petroleum Corporation Limited	82,500.00
Comprising 9,440 acres in townships 39 and 40, ranges 8 and 9, west of the 5th meridian — Viking zone —fourteen quarter sections.	Hunt Oil Company	51,637.00
Comprising 11,200 acres in townships 44 and 45, ranges 12 and 13, west of the 5th meridian — Mississippian age —sixteen quarter sections.	Mobil Oil of Canada Ltd., and Imperial Oil Limited	43,528.77
Comprising 11,200 acres in township 45, ranges 12 and 13, west of the 5th Meridian — Mississippian age — sixteen quarter sections.	Mobil Oil of Canada Ltd., and Imperial Oil Limited	51,666.22
Comprising 9,600 acres in townships 72 and 73, ranges 17 and 18, west of the 5th meridian — Precambrian granite — fourteen quarter sections.	Tennessee Gas Transmission Company	28,240.00
Comprising 8,320 acres in townships 52 and 53, ranges 18 and 19, west of the 5th meridian — Viking zone — twelve quarter sections.	Supertest Petroleum Corporation, Limited	32,400.00

CROWN RESERVE DRILLING RESERVATIONS PURCHASED
 (Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 4,320 acres in townships 13 and 14, ranges 17 and 18, west of the 4th meridian — Rundle group — seven quarter sections.	Sual Holdings Ltd.	10,972.80
Comprising 6,240 acres in townships 40 and 41, ranges 17 and 18, west of the 4th meridian — Cooking Lake formation of the Woodbend group — nine quarter sections.	Northern Natural Gas Producing Company	25,243.20
Comprising 5,120 acres in township 12, ranges 18 and 19, west of the 4th meridian — Mississippian — seven quarter sections.	Sun Oil Company	32,614.40
Comprising 5,120 acres in township 12, range 18, west of the 4th meridian — Mississippian — seven quarter sections.	Sun Oil Company	5,683.20
Comprising 7,040 acres in townships 42 and 43, ranges 22, 23 and 24, west of the 4th meridian — Leduc formation of the Woodbend group — ten quarter sections.	Dome Petroleum Limited, Supertest Petroleum Corporation Limited and Arrowhead Exploration Co.	20,028.28
Comprising 8,320 acres in townships 7 and 8, ranges 25 and 26, west of the 4th meridian — Mississippian — twelve quarter sections.	Sinclair Canada Oil Company, Bailey Selburn Oil & Gas Ltd. and Selbay Exploration Ltd.	5,211.00
Comprising 7,520 acres in townships 73 and 74, ranges 9 and 10, west of the 5th meridian — Cambrian sediments — eleven quarter sections.	Bailey Selburn Oil & Gas Ltd., Canadian Oil Companies Limited, Northern Natural Gas Producing Company and Pan American Petroleum Corporation	12,558.40
Comprising 6,240 acres in township 81, ranges 6 and 7, west of the 6th meridian — Shunda formation of the Rundle group — Nine quarter sections.	Triad Oil Co. Ltd., Leduc Calmar Oil Co. Ltd. and West Canadian Oil and Gas Limited.	1,550.00
Comprising 4,960 acres in townships 22 and 23, ranges 7 and 8, west of the 4th meridian — Mississippian — seven quarter sections.	Western Leaseholds Ltd.	8,339.00
Comprising 4,960 acres in townships 25 and 26, ranges 7 and 8, west of the 4th meridian — Mississippian — seven quarter sections.	Harvey Ferguson Petroleums Ltd.	5,010.00
Comprising 5,120 acres in township 22, range 9, west of the 4th meridian — Mississippian — seven quarter sections.	Western Leaseholds Ltd.	8,739.00
Comprising 4,640 acres in township 21, range 10, west of the 4th meridian — Paleozoic sediments — six quarter sections.	Western Leaseholds Ltd.	2,018.00
Comprising 7,040 acres in townships 29 and 30, range 17, west of the 4th meridian — Nisku formation of the Winterburn group — ten quarter sections.	Central-Del Rio Oils Limited	77,777.77
Comprising 7,520 acres in townships 29 and 30, range 25, west of the 4th meridian — Leduc formation of the Woodbend group — eleven quarter sections.	Tennessee Gas Transmission Company	67,511.00
Comprising 6,240 acres in townships 55 and 56, ranges 4 and 5, west of the 5th meridian — Banff formation — nine quarter sections.	Supertest Petroleum Corporation, Limited, Leduc-Calmar Oil Co. Ltd. and Charter Oil Company Limited	5,111.00
Comprising 10,880 acres in townships 27 and 28, range 7, west of the 5th meridian — Mississippian — sixteen quarter sections.	Imperial Oil Limited	213,456.00

CROWN RESERVE DRILLING RESERVATIONS PURCHASED
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 12,800 acres in townships 43 and 44, ranges 18, 19 and 20, west of the 5th meridian — Devonian system — sixteen quarter sections.	Imperial Oil Limited	266,666.88
Comprising 12,800 acres in townships 44, 45 and 46, ranges 19, 20 and 21, west of the 5th meridian — Devonian system — sixteen quarter sections.	Imperial Oil Limited	186,180.55
Comprising 4,640 acres in townships 34 and 35, ranges 11 and 12, west of the 4th meridian — Paleozoic Sediments — seven quarter sections.	Northwest Geochemical Surveys Ltd.	11,990.00
Comprising 5,120 acres in township 35, range 12, west of the 4th meridian — Paleozoic sediments — seven quarter sections.	United Canso Oil & Gas Ltd.	57,139.20
Comprising 5,237 acres in townships 50, 51 and 52, ranges 12 and 13, west of the 4th meridian — Ireton formation of the Woodbend group — six quarter sections.	Pan American Petroleum Corporation	6,598.62
Comprising 5,120 acres in townships 40 and 41, ranges 13 and 14, west of the 4th meridian — Leduc formation of the Woodbend group — seven quarter sections.	Canadian Pacific Oil and Gas Limited	15,718.40
Comprising 6,400 acres in township 69, range 24, west of the 4th meridian — Elk Point group — nine quarter sections.	Canadian Oil Companies, Limited, Cree Oil of Canada (1958) Limited and The Calgary & Edmonton Corporation Limited	2,664.00
Comprising 8,320 acres in townships 17 and 18, ranges 25 and 26, west of the 4th meridian — Jefferson formation — twelve quarter sections.	Canadian Pacific Oil and Gas Limited	15,558.40
Comprising 6,320 acres in townships 47 and 48, ranges 26 and 27, west of the 4th meridian — Leduc formation of the Woodbend group — ten quarter sections.	Pan American Petroleum Corporation	9,480.00
Comprising 7,040 acres in township 50, range 9, west of the 5th meridian — Mississippian — ten quarter sections.	Canada-Cities Service Petroleum Corporation and Pan American Petroleum Corporation	512,215.00
Comprising 8,960 acres in township 60, ranges 10 and 11, west of the 5th meridian — Gilwood sand of the Elk Point group — fourteen quarter sections.	Union Oil and Gas Corporation of Louisiana and Champlin Oil & Refining Co.	256,106.00
Comprising 7,040 acres in townships 93 and 94, ranges 14 and 15, west of the 5th meridian — Precambrian granite — ten quarter sections.	Union Oil Company of California, The Pure Oil Company and Bailey Selburn Oil & Gas Ltd.	3,215.00
Comprising 6,400 acres in townships 94 and 95, ranges 15 and 16, west of the 5th meridian — Precambrian granite — ten quarter sections.	Texaco Exploration Company and Honolulu Oil Corporation	48,048.06
Comprising 9,760 acres in township 60, ranges 12 and 13, west of the 5th meridian — Gilwood sand of the Elk Point group — fourteen quarter sections.	Mobil Oil of Canada, Ltd.	93,765.60
Comprising 10,720 acres in township 65, ranges 17 and 18, west of the 5th meridian — Precambrian granite — sixteen quarter sections.	The California Standard Company	77,801.27
Comprising 8,820 acres in townships 87 and 88, range 6, west of the 6th meridian — Precambrian granite — twelve quarter sections.	Shell Oil Company of Canada, Limited	105,751.88

CROWN RESERVE DRILLING RESERVATIONS PURCHASED
(Continued)

Description	Offers Accepted From:	Cash Purchase Price
Comprising 5,120 acres in township 35, ranges 12, 13 and 14, west of the 4th meridian — Paleozoic sediments — seven quarter sections.	United Canso Oil & Gas Ltd.	6,451.20
Comprising 4,480 acres in township 40, ranges 12, 13 and 14, west of the 4th meridian — Detrital — six quarter sections.	Great Plains Development Company of Canada, Ltd. and Canadian Superior Oil of California Ltd.	11,050.01
Comprising 5,760 acres in townships 25 and 26, ranges 13 and 14, west of the 4th meridian — Mississippian — eight quarter sections.	Francana Enterprises Limited	43,545.60
Comprising 4,820 acres in township 49, ranges 13 and 14, west of the 4th meridian — Devonian system — six quarter sections.	The California Standard Company and Canadian Pacific Oil & Gas Limited	3,120.00
Comprising 5,600 acres in township 25, ranges 14 and 15, west of the 4th meridian — Mississippian — eight quarter sections.	Francana Enterprises Limited	48,496.00
Comprising 5,600 acres in townships 39 and 40, ranges 14, 15 and 16, west of the 4th meridian — Detrital — eight quarter sections.	Great Plains Development Company of Canada, Ltd.	26,252.80
Comprising 6,533 acres in townships 39 and 40, ranges 22 and 23, west of the 4th meridian — Nisku formation of the Winterburn group — nine quarter sections.	Pan American Petroleum Corporation	14,437.93
Comprising 9,727 acres in township 40, range 28, west of the 4th meridian, and townships 40, 41 and 42, west of the 5th meridian — Elk Point group — fourteen quarter sections.	The California Standard Company	5,798.27
Comprising 10,240 acres in township 38, ranges 3, 4 and 5, west of the 5th meridian — Leduc formation of the Woodbend group — sixteen quarter sections.	Canadian Superior Oil of California, Ltd., J. Ray McDermott & Co., Inc. and Canberra Oil Company Ltd.	699,840.00
Comprising 7,680 acres in townships 43 and 44, ranges 4 and 5, west of the 5th meridian — Mississippian — eleven quarter sections.	Luscar Coals Limited	212,011.00
Comprising 6,880 acres in township 50, ranges 5 and 6, west of the 5th meridian — Mississippian — ten quarter sections.	Pan American Petroleum Corporation	33,505.60
Comprising 7,680 acres in townships 50 and 51, ranges 7 and 8, west of the 5th meridian — Mississippian — eleven quarter sections.	Lobitos Oilfields Canada Ltd.	160,011.00
Comprising 7,040 acres in townships 34 and 35, range 11, west of the 5th meridian — Cambrian sediments — ten quarter sections.	The California Standard Company	2,067.67
Comprising 9,280 acres in townships 72 and 73, ranges 19 and 20, west of the 5th meridian — Precambrian granite — fourteen quarter sections.	Colorado Oil and Gas Ltd.	2,243.04
Comprising 4,058 acres in township 82, range 25, west of the 5th meridian — Paddy-Cadotte — six quarter sections.	Bailey Selburn Oil & Gas Ltd. and The Calgary & Edmonton Corporation Limited	2,640.97
Comprising 3,931 acres in township 82, ranges 25 and 26, west of the 5th meridian — Paddy-Cadotte — six quarter sections.	Bailey Selburn Oil & Gas Ltd. and The Calgary & Edmonton Corporation Limited	2,558.97

CROWN RESERVE DRILLING RESERVATIONS PURCHASED
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 7,187 acres in township 10, range 15 and 16, west of the 4th meridian — Precambrian granite — ten quarter sections.	Honolulu Oil Corporation	16,064.00
Comprising 5,760 acres in townships 15 and 16, range 19, west of the 4th meridian — Shunda formation of the Rundle group — eight quarter sections.	Texaco Exploration Company	65,400.00
Comprising 9,440 acres in townships 30 and 31, ranges 23 and 24, west of the 4th meridian — Elk Point group — fourteen quarter sections.	Choqua Oil Co. Ltd. and Great Plains Development Company of Canada, Ltd.	36,585.92
Comprising 6,560 acres in township 40, ranges 25 and 26, west of the 4th meridian — Nisku formation of the Winterburn group — eleven quarter sections.	Canberra Oil Company Ltd.	265,000.00
Comprising 6,541 acres in township 52, ranges 26, 27 and 28, west of the 4th meridian — Beaverhill Lake formation — ten quarter sections.	Canada-Cities Service Petroleum Corporation	108,272.00
Comprising 9,599 acres in township 28, range 29, west of the 4th meridian, and townships 27, 28 and 29, ranges 1 and 2, west of the 5th meridian — Wabamun group — fourteen quarter sections.	Pan American Petroleum Corporation	351,899.34
Comprising 7,680 acres in townships 41 and 42, ranges 3 and 4, west of the 5th meridian — Mississippian — eleven quarter sections.	Gulf States Oil Company of Canada and El Paso Natural Gas Company	356,620.00
Comprising 7,840 acres in townships 41, 42 and 43, ranges 7 and 8, west of the 5th meridian — Mississippian age — twelve quarter sections.	Amerada Petroleum Corporation	179,904.00
Comprising 8,160 acres in townships 42 and 43, ranges 7 and 8, west of the 5th meridian — Mississippian age — twelve quarter sections.	Amerada Petroleum Corporation	179,904.00
Comprising 6,880 acres in townships 87 and 88, range 14, west of the 5th meridian — Precambrian granite — ten quarter sections.	North Star Oil Limited, The Calgary & Edmonton Corporation Limited and DeKalb Petroleum Corporation	21,001.99
Comprising 10,720 acres in townships 68 and 69, ranges 18 and 19, west of the 5th meridian — Precambrian granite — sixteen quarter sections.	Texaco Canada Limited and Amerada Petroleum Corporation	39,000.00
Comprising 10,240 acres in townships 69 and 70, ranges 19 and 20, west of the 5th meridian — Precambrian granite — sixteen quarter sections.	Texaco Canada Limited and Amerada Petroleum Corporation	39,000.00
Comprising 8,480 acres in townships 73 and 74, ranges 7 and 8, west of the 6th meridian — Permo-Pennsylvanian sediments — twelve quarter sections.	Sohio Petroleum Company	22,060.80
Comprising 8,320 acres in townships 73 and 74, ranges 8 and 9, west of the 6th meridian — Permo-Pennsylvanian sediments — twelve quarter sections.	Sohio Petroleum Company	22,579.20
Comprising 7,680 acres in townships 37 and 38, ranges 25 and 26, west of the 4th meridian — Leduc formation of the Woodbend group — eleven quarter sections.	French Petroleum Company of Canada Ltd.	20,333.36
Comprising 6,400 acres in townships 91 and 92, range 8, west of the 5th meridian — Precambrian granite — nine quarter sections.	Hudson's Bay Oil and Gas Company Limited	14,528.00

CROWN RESERVE DRILLING RESERVATIONS PURCHASED
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 7,520 acres in townships 51 and 52, ranges 9 and 10, west of the 5th meridian — Mississippian — eleven quarter sections.	Skelly Oil Company and Tidewater Oil Company	255,555.00
Comprising 11,360 acres in townships 47 and 48, ranges 14 and 15, west of the 5th meridian — Woodbend group — sixteen quarter sections.	Sinclair Canada Oil Company, Pacific Petroleum Ltd. and Calvan Consolidated Oil & Gas Company Limited	26,127.11
Comprising 9,600 acres in townships 69 and 70, ranges 14 and 15, west of the 5th meridian — Precambrian granite — fourteen quarter sections.	Pan American Petroleum Corporation	29,120.00
Comprising 9,600 acres in townships 70 and 71, ranges 16 and 17, west of the 5th meridian — Precambrian granite — fourteen quarter sections.	Pan American Petroleum Corporation	29,120.00
Comprising 8,320 acres in township 52, ranges 17 and 18, west of the 5th meridian — Viking — twelve quarter sections.	Altana Exploration Company and Supertest Petroleum Corporation Ltd.	45,235.00
Comprising 9,600 acres in townships 70 and 71, ranges 17 and 18, west of the 5th meridian — Precambrian granite — fourteen quarter sections.	Pan American Petroleum Corporation	29,120.00
Comprising 7,680 acres in townships 82 and 83, range 17, west of the 5th meridian — Precambrian granite — eleven quarter sections.	The California Standard Company	17,617.61
Comprising 12,550 acres in townships 44, 45 and 46, ranges 18, 19 and 20, west of the 5th meridian — Mississippian — sixteen quarter sections.	Imperial Oil Limited	251,145.65
Comprising 8,640 acres in township 65, ranges 18 and 19, west of the 5th meridian — Gilwood sand of the Elk Point group — fourteen quarter sections.	Amerada Petroleum Corporation	136,841.60
Comprising 9,600 acres in township 67, ranges 22 and 23, west of the 5th meridian — Leduc formation of the Woodbend group — fourteen quarter sections.	Western Decalta Petroleum Limited, Altana Exploration Company, Canadian Superior Oil of California, Ltd. and Westburne Oil Development Limited	123,750.00
Comprising 13,101 acres in townships 62 and 63, range 27, west of the 5th meridian, and townships 62 and 63, range 1, west of the 6th meridian — Woodbend group — sixteen quarter sections.	Richfield Oil Corporation and Sinclair Canada Oil Company	206,543.17
Comprising 5,120 acres in township 93, ranges 11 and 12, west of the 6th meridian — Spray River equivalent formation — eight quarter sections.	The California Standard Company	12,827.37
Comprising 5,120 acres in township 93, ranges 11 and 12, west of the 6th meridian — Spray River equivalent formation — eight quarter sections.	The California Standard Company	12,827.37
Comprising 4,480 acres in townships 20 and 21, ranges 9 and 10, west of the 4th meridian — Mississippian — six quarter sections.	Western Leaseholds Ltd.	11,137.00
Comprising 4,480 acres in townships 21 and 22, range 9, west of the 4th meridian — Mississippian — six quarter sections.	Western Leaseholds Ltd.	13,757.00
Comprising 6,400 acres in townships 31 and 32, range 17, west of the 4th meridian — Leduc formation of the Woodbend group — ten quarter sections.	Phillips Petroleum Company	18,560.00

CROWN RESERVE DRILLING RESERVATIONS PURCHASED
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 6,400 acres in townships 35 and 36, ranges 21 and 22, west of the 4th meridian — Mississippian — nine quarter sections.	Honolulu Oil Corporation	136,320.00
Comprising 6,970 acres in townships 31 and 32, range 24, west of the 4th meridian — Pekisko formation — ten quarter sections.	Consolidated Mic Mac Oil Ltd. and Mayfair Oil and Gas Ltd.	56,158.00
Comprising 6,880 acres in townships 33 and 34, range 25, west of the 4th meridian — Pekisko formation — ten quarter sections.	French Petroleum Company of Canada Ltd.	207,778.87
Comprising 7,200 acres in townships 50 and 51, ranges 9 and 10, west of the 5th meridian — Mississippian — eleven quarter sections.	Texaco Exploration Company and Texaco Canada Limited	252,517.17
Comprising 10,880 acres in township 45, range 14, west of the 5th meridian — Mississippian — sixteen quarter sections.	Mobil Oil of Canada Ltd., Imperial Oil Limited, The British American Oil Company Limited, French Petroleum Company of Canada Ltd., West Canadian Oil & Gas Limited and Home Oil Company Limited.	102,555.55
Comprising 10,880 acres in township 58, ranges 19 and 20, west of the 5th meridian — Leduc formation of the Woodbend group — sixteen quarter sections.	Canadian Fina Oil Limited, Hudson's Bay Oil and Gas Company Limited and Pan American Petroleum Corporation.	26,035.20
Comprising 7,040 acres in township 86, ranges 22 and 23, west of the 5th meridian — Precambrian granite — ten quarter sections.	Hudson's Bay Oil and Gas Company Limited and Union Oil Company of California	25,072.00
Comprising 8,160 acres in township 85, ranges 3 and 4, west of the 6th meridian — Gilwood sand of the Elk Point group — twelve quarter sections.	Champlin Oil & Refining Co. and The Atlantic Refining Company	81,559.00
Comprising 5,120 acres in townships 21 and 22, range 8, west of the 4th meridian — Mississippian — seven quarter sections.	Western Leaseholds Ltd.	15,760.00
Comprising 4,480 acres in township 21, range 9, west of the 4th meridian — Mississippian — seven quarter sections.	Western Leaseholds Ltd.	13,976.00
Comprising 6,880 acres in townships 31 and 32, ranges 19 and 20, west of the 4th meridian — Leduc formation of the Woodbend group — ten quarter sections.	Amerada Petroleum Corporation	81,781.12
Comprising 6,400 acres in township 32, range 20, west of the 4th meridian — Pekisko formation — nine quarter sections.	Amerada Petroleum Corporation	52,033.97
Comprising 4,960 acres in townships 59 and 60, range 24, west of the 4th meridian — Leduc formation of the Woodbend group — seven quarter sections.	Canadian Oil Companies Limited	18,530.00
Comprising 6,560 acres in townships 46 and 47, range 27, west of the 4th meridian — Cooking Lake formation of the Woodbend group — ten quarter sections.	Pan American Petroleum Corporation	23,392.00
Comprising 8,160 acres in townships 30, 31 and 32, ranges 2 and 3, west of the 5th meridian — Shunda formation of the Rundle group — twelve quarter sections.	Home Oil Company Limited, The Calgary & Edmonton Corporation Limited, Alminex Limited and Security Freehold Petroleum Limited	555,555.55
Comprising 7,040 acres in township 47, range 5, west of the 5th meridian — Mississippian — ten quarter sections.	National Trust Company Limited	250,325.00

CROWN RESERVE DRILLING RESERVATIONS PURCHASED
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 10,880 acres in townships 38 and 39, ranges 8 and 9, west of the 5th meridian — Leduc formation of the Woodbend group — sixteen quarter sections.	Hunt Oil Company and Placid Oil Company	323,131.31
Comprising 7,680 acres in township 50, ranges 9 and 10, west of the 5th meridian — Mississippian — eleven quarter sections.	Pan American Petroleum Corporation and Canada-Cities Service Petroleum Corporation	198,850.00
Comprising 8,320 acres in townships 70 and 71, ranges 11 and 12, west of the 5th meridian — Gilwood sand of the Elk Point group — twelve quarter sections.	L-M Oil Company Ltd., Monsanto Chemical Company and Union Oil & Gas Corporation of Louisiana	25,939.20
Comprising 11,520 acres in township 71, ranges 3 and 4, west of the 6th meridian — Precambrian granite — sixteen quarter sections.	Pan American Petroleum Corporation	25,689.60
		\$15,214,209.66

CROWN RESERVE NATURAL GAS LICENCES PURCHASED

Description	Offer Accepted From:	Cash Purchase Price
Comprising 21,760 acres in townships 21 and 22, ranges 2 and 3, west of the 4th meridian.	Bailey Selburn Oil and Gas Ltd., Cree Oil of Canada (1958) Limited and The Calgary & Edmonton Corporation Limited	11,097.60
Comprising 28,420 acres in townships 15 and 16, ranges 4 and 5, west of the 4th meridian.	Consolidated Mic Mac Oils Ltd. and Mayfair Oil and Gas Ltd.	31,000.00
Comprising 25,120 acres in townships 26, 27 and 28, ranges 4 and 5, west of the 4th meridian.	Bailey Selburn Oil and Gas Ltd. and Union Oil Company of California	61,837.39
Comprising 14,400 acres in township 34, ranges 7, 8 and 9, west of the 4th meridian.	Canadian Delhi Oil Ltd.	75,024.00
Comprising 8,670 acres in township 52, range 20, west of the 4th meridian.	Northwestern Utilities, Limited	130,570.20
Comprising 7,040 acres in township 18, ranges 1 and 2, west of the 4th meridian.	Montreal Trust Company	74,342.40
Comprising 8,000 acres in township 57, range 5, west of the 4th meridian.	The Canadian Salt Company Limited	416.00
Comprising 8,960 acres in townships 39 and 40, range 10, west of the 4th meridian.	Canadian Pacific Oil and Gas Limited	45,427.20
Comprising 13,440 acres in townships 58 and 59, ranges 20 and 21, west of the 4th meridian.	Bailey Selburn Oil & Gas Ltd.	8,100.00
Comprising 12,480 acres in townships 28 and 29, range 1, west of the 4th meridian.	Hudson's Bay Oil and Gas Company Limited	75,004.80
Comprising 37,440 acres in townships 29, 30 and 31, ranges 2, 3 and 4, west of the 4th meridian.	Mid-western Industrial Gas Ltd.	41,558.40
Comprising 18,720 acres in townships 31 and 32 ranges 5 and 6 west of the 4th meridian.	Canadian Export Gas & Oil Ltd.	31,083.57
Comprising 30,880 acres in townships 20, 21, 22 and 23, ranges 8 and 9, west of the 4th meridian.	Kerr-McGee Oil Industries, Inc.	79,361.60

CROWN RESERVE NATURAL GAS LICENCES PURCHASED
(Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 11,840 acres in townships 31 and 32, ranges 1 and 2, west of the 4th meridian.	Consolidated Mic Mac Oils Ltd., Ashland Oil & Refining Company and Mayfair Oil and Gas Ltd.	20,736.15
Comprising 15,680 acres in townships 28, 29 and 30, ranges 4 and 5, west of the 4th meridian.	Three States Canadian Petroleum Ltd.	7,840.00
Comprising 44,000 acres in townships 26, 27 and 28, ranges 9 and 10, west of the 4th meridian.	Sun Oil Company	60,280.00
Comprising 11,840 acres in townships 23, 29 and 30, ranges 13, 14 and 15, west of the 4th meridian.	Scurry-Rainbow Oil Limited	6,156.80
Comprising 13,120 acres in townships 36 and 37, ranges 7 and 8, west of the 4th meridian.	Canadian Pacific Oil and Gas Limited	67,830.40
Comprising 52,523 acres in township 62 range 27, west of the 4th meridian and townships 63 and 64, ranges 1 and 2, west of the 5th meridian.	Canadian Export Gas & Oil Ltd.	32,168.23
		\$ 859,334.74

CROWN RESERVE FRACTIONAL AREA LEASES PURCHASED

Description	Offer Accepted From:	Cash Purchase Price
Comprising 150 acres in section 4, township 36, range 1, west of the 5th meridian.	Fargo Minerals Ltd.	\$ 17,791.50
Comprising 15 acres in section 17, township 30, range 2, west of the 5th meridian.	Home Oil Company Limited	12,890.00
Comprising 19 acres in section 7, township 3, range 28, west of the 4th meridian.	The British American Oil Company Limited	9,727.00
Comprising 8 acres in section 27, township 56, range 21, west of the 4th meridian.	Western Leaseholds Ltd.	3,460.00
Comprising 2 acres in section 35, township 33, range 26, west of the 4th meridian.	The British American Oil Company Limited	562.62
Comprising 59.82 acres in section 5, township 44, range 22, west of the 4th meridian.	Falcon Exploration Ltd.	2,810.34
Comprising 101.1 acres in section 5, township 49, range 22, west of the 4th meridian.	Canada-Cities Service Petroleum Corporation	1,211.41
Comprising 98.93 acres in section 32, township 25, range 6, west of the 5th meridian and in sections 5 and 6, township 26, range 6, west of the 5th meridian.	Shell Oil Company of Canada, Limited	1,335.56
		\$ 49,788.43

CROWN RESERVE NATURAL GAS LEASES PURCHASED
(Pursuant to The Mines and Minerals Act Section 280)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 12.21 acres in section 19, township 22, range 17, west of the 4th meridian.	Canadian Pacific Oil and Gas Limited	\$ 267.09
The west half of section 30, township 38, range 22, west of the 4th meridian.	The California Standard Company	60,720.44

CROWN RESERVE NATURAL GAS LEASES PURCHASED
 [Pursuant to The Mines and Minerals Act Section 280]
 (Continued)

Description	Offer Accepted From:	Cash Purchase Price
Section 36, township 38, range 23, west of the 4th meridian.	The California Standard Company	144,311.64
Legal subdivisions 10, 15 and 16 of section 28, township 38, range 22, west of the 4th meridian.	The California Standard Company	4,108.17
Comprising 16.05 acres in section 1, township 40, range 22, west of the 4th meridian.	The California Standard Company	2,342.89
Comprising 31.06 acres in section 13, township 40, range 22, west of the 4th meridian.	The California Standard Company	1,947.00
The north east quarter of section 26, township 38, range 23, west of the 4th meridian.	The California Standard Company	4,354.79
Comprising 12 acres in section 1, township 39, range 23, west of the 4th meridian.	The British American Oil Company Limited	207.68
Comprising 6.55 acres in section 1, township 40, range 22, west of the 4th meridian.	The British American Oil Company Limited	1,018.98
Comprising 14.25 acres in section 3, township 39, range 22, west of the 4th meridian.	The British American Oil Company Limited	6,444.57
Comprising 10.4 acres in section 27, township 38, range 22, west of the 4th meridian.	The British American Oil Company Limited	84.37
Comprising 2 acres in section 25, township 39, range 22, west of the 4th meridian.	Imperial Oil Limited	642.51
Comprising 23 acres in section 25, township 39, range 22, west of the 4th meridian.	New Superior Oils of Canada Limited	8,424.02
Comprising 16.83 acres in section 5, township 39, range 22, west of the 4th meridian.	The California Standard Company and The British American Oil Company Limited	5,445.11
Comprising 16.25 acres in section 5, township 39, range 22, west of the 4th meridian.	Medallion Petroleum Limited and The British American Oil Company Limited	6,210.93
Comprising 294.6 acres in section 4, township 18, range 6, west of the 4th meridian.	Medicine Hat Brick and Tile Company Limited	3,682.50
		\$ 250,212.64

CROWN RESERVE NATURAL GAS LEASES PURCHASED
 [Pursuant to the Mines and Minerals Act Section 282 Subsection (2) Clause (a)]

Description	Offer Accepted From:	Cash Purchase Price
The east half of section 34, township 55, range 15, west of the 4th meridian.	Redwater Oils Ltd.	\$ 15,450.00
		\$ 15,450.00

CROWN RESERVE NATURAL GAS LEASES PURCHASED
 [Pursuant to The Mines and Minerals Act Section 282 Subsection (2) Clause (b)]

Description	Offer Accepted From:	Cash Purchase Price
The east half of section 27, township 22, range 10, west of the 4th meridian.	Tidal Petroleum Corporation Ltd.	\$ 2,500.00
Comprising 46.48 acres in section 25, township 22, range 18, west of the 4th meridian.	Canadian Pacific Oil and Gas Limited	1,053.06

DEPARTMENT OF MINES AND MINERALS

CROWN RESERVE NATURAL GAS LEASES PURCHASED
 [Pursuant to The Mines and Minerals Act Section 282 Subsection (2) Clause (b)]
 (Continued)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 75 acres in section 12, township 25, range 21, west of the 4th meridian.	Canadian Pacific Oil and Gas Limited	10,664.00
The north west quarter of section 33, township 19, range 10, west of the 4th meridian.	Amurex Oil Company and Los Angeles Alberta Petroleum Ltd.	12,500.00
Comprising 13.3 acres in section 7, township 53, range 12, west of the 4th meridian.	Canadian Pacific Oil and Gas Limited	1,060.00
Comprising 134.5 acres in section 23, township 53, range 26, west of the 4th meridian.	Imperial Oil Limited	9,247.00
Comprising 76 acres in section 14, township 24, range 20, west of the 4th meridian.	Canadian Pacific Oil and Gas Limited	4,108.75
Comprising 65.1 acres in section 9, township 55, range 22, west of the 4th meridian.	Provo Gas Producers Limited	650.00
		\$ 41,782.81

CROWN RESERVE PETROLEUM LEASES PURCHASED
 (Pursuant to the Mines and Minerals Act Section 280)

Description	Offer Accepted From:	Cash Purchase Price
Comprising 1,120 acres in township 25, range 12, west of the 4th meridian.	Hudson's Bay Oil and Gas Company Limited and Canadian Delhi Oil Ltd.	\$ 22,400.00
Comprising 3,679 acres in townships 24 and 25, range 12, west of the 4th meridian.	Hudson's Bay Oil and Gas Company Limited and Canadian Delhi Oil Ltd.	73,580.00
		\$ 95,980.00

Reservations — During the fiscal year 274 reservations were issued covering an area of 13,384,126 acres and at the close of the year 674 reservations were active containing an area of 36,181,530 acres.

The revenue from reservation fees amounted to \$70,500.00, for extending reservations amounted to \$4,851,058.45 and the revenue from bonuses accepted by the Director of Mineral Rights at sales of petroleum and natural gas reservations by tender amounted to \$2,129,436.78.

The Petroleum and Natural Gas Reservation Regulations were amended in August, 1959. The section providing that the number of reservations that may be held by a person at any one time by application shall not exceed two was deleted.

Credit of not in excess of fifty per cent of the approved expenditures incurred in geophysical examination including drilling on petroleum and natural gas reservations may apply to the rental for one year of any lease or leases acquired out of the reservations and during the fiscal year under review rentals of \$5,849,640.04 were satisfied from such expenditures.

Crown Reserve Drilling Reservations — During the fiscal year 144 drilling reservations were issued covering an area of 1,073,412 acres and at the close of the year 163 were active containing an area of 1,285,860 acres.

The revenue from drilling reservation fees amounted to \$36,000.00, from rentals \$705,708.75 and the revenue from accepted offers at sales of Crown reserve drilling reservations amounted to \$15,214,209.66.

Credit may be granted for expenditures incurred in drilling a well on a drilling reservation and applied in satisfaction of the first year's rental. During the fiscal year rental on leases acquired out of the reservations of \$177,878.32 were satisfied by credit.

Natural Gas Licences — During the fiscal year 30 natural gas licences covering an area of 599,499 acres were issued and at the close of the year 24 licences were active containing an area of 676,598 acres. The revenue from fees was \$8,250.00 and from rentals was \$73,040.63. Credit may be granted for expenditures incurred in drilling a well on a natural gas licence and applied in satisfaction of the first year's rental. During the fiscal year rentals on leases acquired out of the licences of \$51,187.94 were satisfied by credit.

The Natural Gas Licence Regulations were amended in April, 1959. Provision was made for an applicant for a natural gas licence to include in his application, lands comprised in an adjacent reservation, where he is the holder of the adjacent reservation.

Crown Reserve Natural Gas Licences — During the fiscal year nineteen Crown reserve natural gas licences covering an area of 384,333 acres were issued. At the close of the year 21 licences were active, containing an area of 464,303 acres. The revenue from fees was \$4,750.00, from rentals \$45,885.45 and the revenue from accepted offers at sales of Crown reserve natural gas licences amounted to \$859,334.74. Credit may be granted for expenditures incurred in drilling a well on a Crown reserve natural gas licence and applied in satisfaction of the first year's rental. During the fiscal year rentals on leases acquired out of the licences of \$21,436.91 were satisfied by credit.

Natural Gas Leases — During the fiscal year 72 natural gas leases were issued covering 268,011 acres, and at the close of the fiscal year a total of 467 leases were in existence comprising an area of 2,081,094 acres. Forty-six of the leases were granted out of natural gas licences or Crown reserve natural gas licences and permit the recovery of natural gas for one or more zones specified in the lease. One lease authorizing the recovery of natural gas was issued, being considered essential in the operation of a natural gas utility, eleven leases were issued comprising the balances of spacing units to permit natural gas wells that were capable of commercial production to be operated at full production allowables and fourteen leases were issued within unitized areas.

The annual rental of a natural gas lease is thirty-three and one-third cents an acre and while an adequate market or a market

in which the lessee may participate is not available, the annual rental is reduced to ten cents an acre. The revenue received from fees was \$730.00 and from lease rentals \$466,212.39.

COAL

In the fiscal year, fifteen leases were issued containing 2,574 acres, being made up of new and renewal and second renewal leases. There are now 448 active leases comprising 142,798 acres. There were twelve road allowance coal mining leases issued and there are now 136 active. The revenue received from fees was \$130.00 and from lease rentals \$59,575.73.

Crown royalties collected during the fiscal year were \$90,303.44 and the following tonnage of coal, subject to royalty was mined.

	Tons
Coal Leases.....	873,090
Coal Lands and Mineral Sales.....	175,903
TOTAL	1,048,993

QUARRYING

During the fiscal year 23 quarrying leases comprising a total of 2,545 acres were issued, four for marl, one for bentonite, eight for clay, five for limestone, one for dolomitic siltstone, one for shale and three for limestone and shale.

Extraction of 971,866 tons of limestone and shale, 48,358 cubic yards of clay, 9,993 tons of bentonite and 4,956 tons of sandstone from Crown leases was reported and at the close of the fiscal year 79 quarrying leases containing an area of 14,611 acres were active.

BITUMINOUS SANDS

During the fiscal year fourteen bituminous sands leases, comprising a total of 479,756 acres were issued, and at the close of the year 31 leases were active containing an area of 717,852 acres. Thirty-one bituminous sands prospecting permits were issued during the year. There were 61 permits active at the close of the year.

QUARTZ

During the fiscal year 71 existing claims were continued for a further year. The claim in the Drumheller district for the recovery of bentonite was one of those continued.

PLACER

During the fiscal year seven placer claims were recorded and 42 were renewed for another year. There were 89.8 ounces of gold 8.5 ounces of silver recovered at two gravel plants.

SODIUM CHLORIDE (Common Salt)

During the fiscal year the plant near Lindberg operated and reported extraction of 37,523 tons, an increase of 204 tons over the previous year.

SULPHUR

The sulphur plants at Jumping Pound and Turner Valley produced 41,620 short tons during 1959, a decrease of 1,048 tons from the previous year. The Redwater plant produced 1,858 tons, an increase of 126 tons from the previous year. The plant at Pincher Creek produced 134,753 tons, an increase of 56,827 tons over the previous year. The plant at Okotoks commenced operations in June, 1959 and 58,826 tons were produced. The plant at Nevis commenced operations in December, 1959 and 1,587 tons were produced. The total production of sulphur in Alberta for 1959 was 238,644 tons, an increase of 116,318 tons over the previous year.

MISCELLANEOUS LEASES

A special mineral lease was issued to Camrose Tubes Limited covering 66.02 acres in section 2, township 47, range 20, west of the 4th meridian at an annual rental of \$198.16. The lease comprises the plant site of the Camrose steel mill.

SODIUM SULPHATE PROSPECTING PERMITS

A sodium sulphate prospecting permit comprising 6,400 acres in townships 39 and 40, ranges 5 and 6, west of the 4th meridian was issued.

MINERAL SALES

During the fiscal year eight notifications were issued pursuant to section 26 of The Mines and Minerals Act. These are known as mineral sales and are acquired at a nominal consideration of \$1.00. Section 26 provides a means whereby minerals in roadways may be returned to the adjacent owner.

WELL LICENCES

There were 2,008 well licences issued during the fiscal year for the drilling of oil and gas wells, structure test holes, injection wells and water wells.

DRILLING STATISTICS

The drilling and production of petroleum and natural gas wells in the Province are administered by the Oil and Gas Conservation Board, 603 - 6th Avenue South West, Calgary, Alberta, and particulars as to the drilling activity, production and statistical data are included in weekly, monthly and annual reports issued by the Board.

GEOPHYSICAL AND GEOLOGICAL EXPLORATION

A person desiring to undertake geophysical or subsurface geological exploration must obtain a licence from the Department.

The applicant before the issue of the licence must furnish a cash deposit to the Provincial Treasurer in the sum of \$1,000.00 to insure that operations are conducted in accordance with The Mines and Minerals Act and the regulations governing geophysical exploration. During the fiscal year 130 licences were issued and they will expire on the 31st of March following, unless renewed.

The regulations governing operations by seismic, gravimetric, magnetic, electrical, geochemical, test drilling or other method which may be used for the purpose of exploring the subsurface require the operator to obtain an annual permit to operate geophysical equipment and a fee of \$25.00 is required for each permit. During the fiscal year fifteen such permits were issued and 67 renewed.

There are four investigators and each is allocated an area of the Province and he inspects crews in his area. When it is represented to the Department that a crew has interfered with the right of a person the matter is investigated and in the event that damage or other interference has resulted an investigator endeavours to assist the person affected and the crew in arriving at a settlement.

The Geophysical Regulations were amended in December, 1959 and a section was added providing for operations in the Wilderness Provincial Park.

UNIT OPERATION OF MINERALS

During the fiscal year ten agreements pursuant to Part IX of The Mines and Minerals Act were entered into for unit operation of petroleum and natural gas properties. These agreements pertained to the following:

Five agreements pertained to the Cardium formation in the Pembina Area.

One agreement pertained to the Basal Quartz Sandstone member of the Lower Cretaceous formation in the Campbell Area in 2,382 acres in township 54, range 25, west of the 4th meridian.

One agreement pertained to the Elkton member of the Turner Valley formation of the Rundle Group of Mississippian Age in the Carstairs Area in 7,680 acres in townships 29 and 30, range 2, west of the 5th meridian.

One agreement pertained to the Nisku, Ireton and Leduc formations in the Nevis Area in townships 38, 39 and 40, ranges 21, 22 and 23, west of the 4th meridian.

One agreement pertained to the Basal Quartz member of the Lower Cretaceous formation in the Alexander Indian Reserve Area in 7,857 acres in township 56, range 27, west of the 4th meridian and township 56, range 1, west of the 5th meridian. One agreement pertained to the Medicine Hat sand of the

Colorado group in the Medicine Hat-Roseglen Area in townships 15 and 16, ranges 2 and 3, west of the 4th meridian.

Three units involving Crown lands were established pursuant to section 73 of the Oil and Gas Conservation Act. This section deals with the compulsory pooling of tracts within a spacing unit. Two units pertain to the gas in the Crossfield formation in the Calgary Area and one unit pertains to the gas in the Bow Island formation in the Etzikom field.

In order to permit operators of petroleum and natural gas properties to comply with schemes directed or approved by the Oil and Gas Conservation Board, 36 agreements were made permitting the performance of the schemes. Six agreements permitted the injection of gas for pressure maintenance purposes including three into the Cardium formation of the Pembina Field, one into the Cardium formation of the Keystone Field, one into the Cardium formation of the Sundre Field, and one into the D2 formation of the Leduc Woodbend Field. Seven agreements authorized the return of salt water produced with petroleum to subsurface formations in the Bellshill Lake, Cessford, Pouce Coupe South, Stettler, Sundre, Whitemud and Hays Fields. Twenty-three agreements permitted the injection of water for pressure maintenance purposes, 22 into the Cardium formation of the Pembina Field and one into Wainwright pool of the Wainwright Field.

STAFF

At the close of the fiscal year the Division staff numbered 57 employees and they continued to give outstanding service.

MINERAL TAX DIVISION

Report of the Superintendent

J. A. SAVAGE

Producing area tax revenue for the fiscal year ending March 31, 1960 amounted to \$909,799.94 being a decrease of \$205,678.91 from the previous year's revenue of \$1,115,478.85. The tax rate for the 1959 assessment remained at eight mills.

Acreage tax received for the year 1959 was \$387,452.83 as against \$306,179.40 for the preceding year being an increase of \$31,273.43.

Pincher Creek was the only new field added to the designated producing areas for the year 1959. This is a petroleum and natural gas field and was assessed as a unitized area. Assessment was made in accordance with the tract factors listed in the Royalty Unitization Agreement, Pincher Creek Gas Field—Alberta.

All producing areas designated by Ministerial Order are listed below showing the number of parcels assessed, minerals assessed and the assessed value of each producing area.

Producing Area	Parcels Assessed	Principal Mineral	Assessed Value
Acheson	22	Petroleum	\$3,383,368.92
Bonnie Glen	20	Petroleum	6,147,008.38
Fenn-Big Valley	59	Petroleum	8,435,616.25
Joarcam	70	Petroleum	6,409,496.29
Joffre	48	Petroleum	8,335,839.28
Jumping Pound	56	Natural Gas	1,543,795.82
Leduc	274	Petroleum	25,033,041.06
Medicine Hat - Redcliff	107	Natural Gas	356,852.50
Pincher Creek	25	Petroleum and Natural Gas	1,127,617.33
Provost	119	Natural Gas	214,307.53
Redwater	16	Petroleum	6,490,731.38
Stettler	12	Petroleum	2,170,934.65
Turner Valley	60	Petroleum and Natural Gas	4,583,622.93
Viking Kinsella	486	Natural Gas	1,383,141.00
Westerose	5	Petroleum	1,957,593.50
Wizard Lake	6	Petroleum	3,251,544.78

In addition to producing areas designated by Ministerial Order, there are 718 parcels on which a well or mine is located. These had a total assessed value of \$32,545,812.10 with the principal minerals assessed being petroleum, natural gas, coal and salt.

Under the heading of parcels assessed are the number of items appearing on the assessment roll with each parcel relating to the area contained in a certificate of title. In determining the assessed value of a parcel, each spacing unit on which a well has been brought into production is calculated separately; consequently, several calculations may be made in arriving at the assessment for petroleum in a parcel containing minerals in a section of land.

The revenue derived from the taxation of minerals from the enactment of the statute in 1941 until March 31st, 1949 collected by the Department of Lands and Mines was \$1,921,180.47 and revenue collected by the Department of Mines and Minerals from April 1, 1949 is shown in the following tabulation:

Year	Mill Rate	Producing	Per Acre	Acreage Tax	Fees	Total
1949-50	8	\$ 452,838.16	1½c	\$297,883.10	\$ 286.50	\$ 751,007.76
1950-51	8	526,029.61	1½c	307,062.62	511.00	833,603.23
1951-52	8	444,298.91	1½c	323,185.71	2,320.10	769,799.72
1952-53	8	572,671.45	1½c	310,285.08	3,204.00	886,160.53
1953-54	8	717,352.55	1½c	283,853.18	1,055.50	1,002,261.23
1954-55	8	1,081,913.72	1½c	277,842.74	1,467.00	1,311,223.46
1955-56	8	1,081,802.40	1½c	264,496.50	914.50	1,297,213.40
1956-57	8	1,070,380.73	1½c	272,883.90	1,101.50	1,344,366.13
1957-58	8	1,232,795.31	1½c	282,057.60	1,056.50	1,515,909.41
1958-59	8	1,115,478.85	1½c	306,179.40	472.00	1,422,130.25
1959-60	8	909,799.94	1½c	337,452.83	545.50	1,247,798.27

There were 1,091 mineral tax certificates issued during the fiscal year with revenue derived therefrom being \$545.50. A tax certificate shows the amount of current taxes and arrears payable with respect to the mineral or minerals contained in a certificate of title and anyone may obtain a certificate for a fee of fifty cents.

During the fiscal year there were 336 titles returned to the former owners under The Mineral Titles Redemption Act and paid in each instance were the ten dollar fee, taxes with interest and subsequent taxes. There were 409 titles returned in the previous year, making a total of 745 titles returned since the inception of the Act on April 14, 1958.

In some instances, after the mineral titles were acquired by the Crown, the minerals were granted under lease, license, reservation, permits or other agreement for exploration and development. The statute provides that where the minerals have been granted by the Crown, the return of the title to the former owner must be delayed until the minerals are no longer under lease, licence, reservation, permit or other agreement. In these instances, the former owner is entitled to receive the moneys collected by the Crown less a deduction of an amount equal to the tax that would have been charged had title been returned.

Return of the mineral title was deferred in 41 cases during the fiscal year and the amount of moneys returned to the former owners was \$76,151.39. This brings the total to \$263,904.53 that has been returned to former owners since the Act came into force.

There were 17 agreements terminated which resulted in titles being returned to former owners. As at March 31, 1960, the number of titles containing minerals under lease, licence, reservation, permit or other agreement stands at ninety-nine.

PIPE LINE DIVISION

Report of the Superintendent

W. RUTHERFORD

During the fiscal year ending March 31st, 1960, construction of pipe lines transmitting crude oil was comparatively inactive and apart from the construction of an oil line from Swan Hills to Edmonton the majority of oil pipe line construction was in gathering systems.

In respect of pipe lines transmitting natural gas, The Alberta Gas Trunk Line Company Limited constructed another large section of their system in the prairies to provide additional gas to the Trans Canada Pipe Line Company and many additional gas gathering systems were completed.

Amendments to The Pipe Line Act, 1958 were presented and ratified by the Legislature and these amendments came into effect on the 1st of July, 1959. The amendments were based on experience in applying the requirements of the Act and formulated another method of licencing pipe lines to facilitate the putting into operation of pipe lines as soon as they have been satisfactorily tested.

During this period the Pipe Line Division staff was increased from 4 to 8, to carry on the work of the Division. In particular it was found that in addition to the testing of currently constructed pipe lines it would also be necessary to spend considerable time on licencing the pipe lines which were constructed before the coming into force of the Act.

The total number of applications for pipe line permits which passed through the Division was 560. These applications are checked in the Division to make sure that they comply with the required standard of safety. During this period it was noted that due to the incidence of hydrogen sulphide gas, particularly in the Foothills area, that additional safety precautions are necessary in the design, construction and operation of pipe lines.

Private lines increased during this period and as shown in the summary, 119 licences were granted. It was necessary to develop standards of safety to deal with the many and varied natural gas supplies from gas wells, oil wells and even water wells.

With the development of major gas transmission lines and the increased quantity of gas being transmitted resulting in fall off in reservoir pressures together with the increasing number of injection projects, the number of gas compressor stations has increased. This type of installation presents a complicated safety problem and the Division has formulated a method of checking such stations before construction commences and for test after construction has been completed.

In accordance with the requirements of The Pipe Line Act, Provisional Licences based on actual inspection and testing of

the pipe lines were prepared and the total number of such Licences granted was 313.

The number of compressor stations checked for safety was 3, as this work was only started during the year.

The summary of pipe line licences is attached.

In this year of operation the problems encountered have been classified and methods of dealing with them have been solved to facilitate ease in operation of pipe lines and at the same time to maintain a satisfactory standard of safety.

Type of Pipe Lines	Licences Granted to March 31st, 1959	Mileage of Pipe Line	Licences Granted to March 31st, 1960	Mileage of Pipe Line	Cancelled	Mileage Cancelled	Grand Total Licences Granted	Total milege of Pipe Line
Oil Lines 1	131.57	30	424.64	1	20.47	30	535.74	
Secondary Lines for Oil 18	24.47	621	711.70	....	....	639	736.17	
Gas Lines 26	584.57	45	842.92	....	....	71	1427.49	
Secondary Lines for Gas 64	636.54	94	368.19	....	....	158	1004.73	
Distribution Lines 52	26.91	127	98.25	....	....	179	125.16	
Private Lines .....	....	119	20.21	....	....	119	20.21	
Secondary Lines for Water and Other Substances 24	30.89	37	41.09	....	....	61	71.98	
	185	1843.95	1073	2507.00	1	20.47	1257	3921.48

TECHNICAL DIVISION

Report of the Superintendent of the Technical Division

J. M. NOVAK

The following report summarizes the operations of the Technical Division for the fiscal year ending March 31, 1960.

DRAUGHTING, LAND DESCRIPTIONS AND GENERAL

The series of maps covering approximately forty-eight townships for each area and on a scale of three-quarters of an inch to the mile were drawn covering the following new areas:

ALEXANDER—Townships 53 to 60, Ranges 26 to 28, West of the 4th Meridian and Ranges 1 to 5, West of the 5th Meridian.

BERLAND RIVER—Townships 53 to 60, Ranges 18 to 23, West of the 5th Meridian.

BERLAND RIVER WEST—Townships 53 to 60, Ranges 24 to 28, West of the 5th Meridian and Ranges 1 and 2, West of the 6th Meridian.

BURNT TIMBER—Townships 29 to 36, Ranges 6 to 11, West of the 5th Meridian.

CALGARY—Townships 22 to 28, Ranges 23 to 29, West of the 4th Meridian.

COUNTESS—Townships 14 to 21, Ranges 14 to 19, West of the 4th Meridian.

DRUMHELLER—Townships 29 to 34, Ranges 16 to 22, West of the 4th Meridian.

JUMPING POUND—Townships 22 to 28, Ranges 1 to 5, West of the 5th Meridian.

LOVETT RIVER—Townships 45 to 52, Ranges 18 to 23, West of the 5th Meridian.

PADDLE RIVER—Townships 53 to 60, Ranges 6 to 11, West of the 5th Meridian.

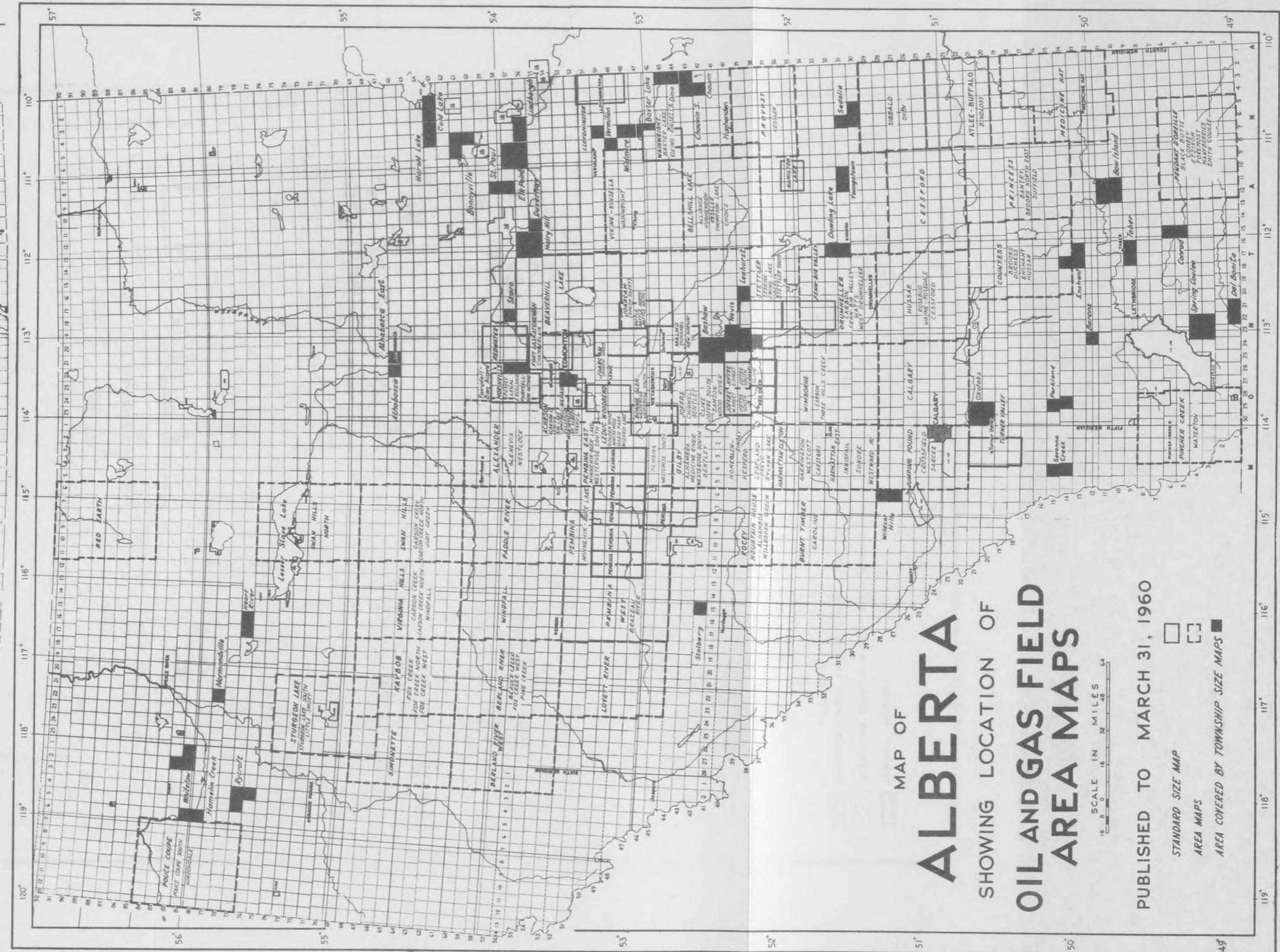
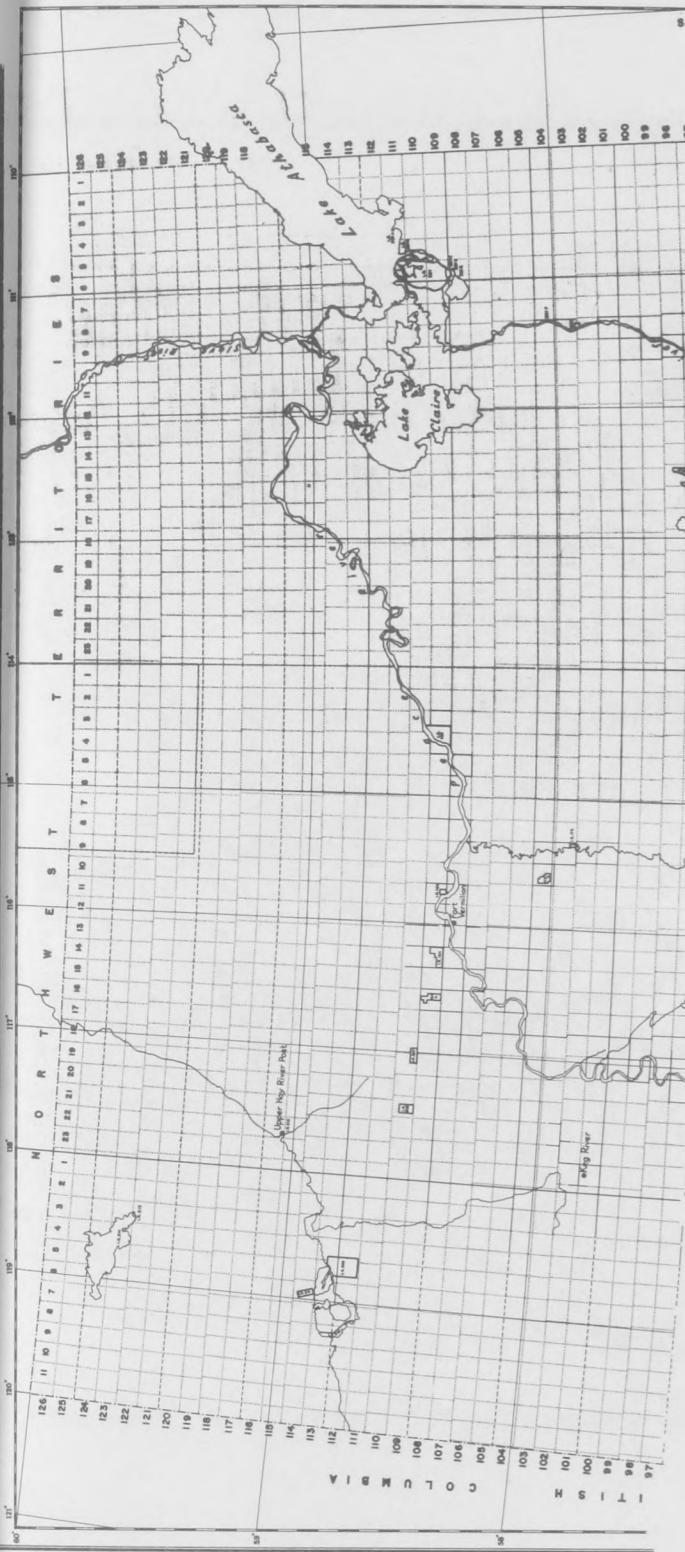
PINCHER CREEK—Townships 1 to 8, Ranges 28 to 30, West of the 4th Meridian and Ranges 1 to 3, West of the 5th Meridian.

SIMONETTE—Townships 61 to 68, Ranges 24 to 27, West of the 5th Meridian and Ranges 1 and 2, West of the 6th Meridian.

One map on a scale of $2\frac{1}{2}$ inches to the mile was drawn for the following new area:

WAINWRIGHT—Townships 44 to 46, West half of Range 5 to Easterly 5/6ths. of Range 7, West of the 4th Meridian.

The map of the Turner Valley Area, on a scale of two inches to the mile, was redrawn covering a larger area and extends from Township 18 to 21, Range 2 to Easterly 1/6th of Range 4, West of the 5th Meridian.



Seven new maps were drawn to the scale of two inches to the mile on transparent township plans covering the following fields:

Enchant, Heart River, Parkland, Savanna Creek, Sedalia, Stolberg and Wildcat Hills

All new maps drawn and previously drawn are subject to showing the locations of wells as well licences are granted. When the status of a well changes, it is adjusted on the maps. The limits of fields as established by the Oil and Gas Conservation Board are also included on the maps.

A map of the Province showing the location of oil and gas field maps published to March 31, 1960 is included in this report.

A total of 4,499 maps were distributed by the Department which is an increase of 578 from the 3,921 maps distributed in the previous year. A list of maps is available indicating the price of each map.

The number of subscribers to the Petroleum and Natural Gas Reservation Sketch Service increased from 62 to 63 and 63,000 copies of sketches were prepared and mailed showing an increase of approximately 7,000 over last year's total.

The Division had 44 subscribers to the Bituminous Sands Prospecting Permit Sketch Service and 1,400 sketches were prepared and mailed.

During the year, 1,925 applications for licences to drill wells were recommended for issue by the Oil and Gas Conservation Board, which is an increase of 118 from the 1,807 applications dealt with in the previous year. The Division, upon receipt of each application, searches the ownership of Crown minerals in the spacing unit allotted to the well.

Land descriptions were prepared for all mineral dispositions, as well as descriptions for recommendations to council.

In addition to the 63,000 copies of petroleum and natural gas reservation sketches and 1,400 bituminous sands prospecting permit sketches which were reproduced on the multigraph duplicator machine, 659,794 copies of other items were reproduced, representing an increase of 133,344 copies over the previous year.

The map of Alberta showing the areas covered by all petroleum and natural gas reservations to March 31, 1959 has been revised to indicate the area of reservations issued during the present year and is included in this report.

The photostat and ozalid print requirements of the Department, as in past years, continued to be supplied by the Technical Division, Department of Lands and Forests.

The "Verifax Copier" reproduced 33,720 copies from original letters and other items as required during the year under review.

The plan attached to each of the 72 applications for quartz claims and 55 placer claims was examined and, when satisfactory, plotted in the departmental township record.

RECORDS

In addition to the work completed as shown in the tables hereunder, the Records Branch of the Division supplied 1,432 township plots to the public indicating available Crown minerals and also plots showing the status of Crown minerals compared to 1,941 plots distributed in the previous year.

Since the coming into force of The Pipe Line Act, 1958, pipe line permits and licences were recorded and included in the township records of the Division.

*DISPOSITIONS, CANCELLATIONS AND TRANSFERS RECORDED IN THE TOWNSHIP REGISTERS

	1958-59	1959-60
Coal Mining Leases	62	64
Road Allowance Coal Mining Leases	4	32
Petroleum and Natural Gas Leases	5,341	7,237
Petroleum and Natural Gas Reservations	562	597
Crown Reserve Drilling Reservations	265	289
Natural Gas Licences	51	58
Natural Gas Leases	80	75
Crown Reserve Natural Gas Licences	19	31
Quarrying Leases	15	32
Notifications	8	13
Transfers	4,494	2,707
Bituminous Sands Prospecting Permits	26	45
Bituminous Sands Leases	5	14
Quartz Claims	324	72
Placer Claims	28	55
Special Mineral Leases	1	1
Iron Prospecting Permits	2	---
Mineral Sales	10	8
Petroleum Leases	---	2
Iron Leases	2	---
Sodium Sulphate Permits	1	1
 TOTALS	 11,300	 11,333

* Includes issued, reinstated, divided, renewed and certificates of work.

NUMBER OF AGREEMENTS TRANSFERRED

	1958-59	1959-60
Petroleum and Natural Gas Lease	4,039	2,401
Petroleum and Natural Gas Reservation	308	176
Coal Mining Lease	18	3
Quarrying Lease	6	8
Natural Gas Lease	51	57
Natural Gas Licence	3	3
Crown Reserve Natural Gas Licence	---	5
Bituminous Sands Lease	---	2
Bituminous Sands Prospecting Permit	28	18
Crown Reserve Drilling Reservation	37	33
Geophysical Permit	1	---
Agreement Scheme	1	1
Iron Lease	2	---
 TOTALS	 4,494	 2,707

NUMBER OF DOCUMENTS FILED

Type of Document	1958-59	1959-60
Mechanic's Lien	14	41
Discharge of Mechanic's Lien	10	19
Bank Securities	138	164
Discharge of Bank Securities	11	16
 TOTALS	 173	 240

Thirteen notifications, for the issue of certificates of title, were issued during the fiscal year of which one was for an exchange of minerals, three returned minerals underlying road diversions to the owners of the adjacent minerals, eight were issued to bring lands within the corrected plans of survey and one to vest title in the Dominion of Canada to all mines and minerals other than gold and silver under the Clear Hills Indian Reserve No. 152C.

Four transfers of minerals were also issued to return minerals underlying road diversions to the owners of the adjacent minerals.

During the eleven years of the operation of the Department one hundred and twenty-three notifications and four transfers have been issued.

ACCOUNTING DIVISION

Report of the Administrative Accountant and Personnel Officer

W. E. SHILLABEER

A surplus of \$141,867,169.76 on Income Account was shown for the fiscal year ending March 31st, 1960.

Net Revenue on Income Account amounted to \$143,548,121.83.

Gross Receipts from all sources amounted to \$151,382,363.72.

Expenditure on Income Account for the year amounted to \$1,680,952.07. Particulars of expenditure may be found in Statement "C".

As at March 31st, 1960 there were 37,906 Accounts receivable as compared with 35,764 as at March 31st, 1959. The number of active accounts as at March 31st, 1960 is made up as follows:

	No. of Accounts
Petroleum and Natural Gas Leases, Rental	30,993
Petroleum and Natural Gas Leases, Royalty	1,839
Petroleum and Natural Gas Reservations	704
Petroleum and Natural Gas Drilling Reservations	164
Natural Gas Licences	26
Natural Gas Leases	507
Crown Reserve Natural Gas Licences	20
Coal Leases, Rental	527
Coal Leases, Royalty	96
Quarrying Royalty	77
Bituminous Sands, Rental	95
Registration of Assignment Tax	268
Mineral Tax Producing Area	2,552
Mining Leases, (Miscellaneous)	38
	37,906

There were 3,861 accounts cancelled or closed and 6,003 accounts opened.

INDEX TO STATEMENT

- A — Statement of Receipts from all sources
- B — Statement of Receipts — Income Account
- C — Statement of Expenditure by Appropriation and Character
- D — Statement of Net Receipts by Division.
- E — Statement of Receipts — School Minerals
- F — Statement of Receipts and Expenditure
- G — Statement of Provincial Minerals Revenue by Fiscal Years received by the Province for the period April 1st, 1949 to March 31st, 1960.

DEPARTMENT OF MINES AND MINERALS

H — Statement of School Minerals Revenue by Fiscal Years received by the Province for the period April 1st, 1949 to March 31st, 1960.

Statement "A"

STATEMENT OF RECEIPTS FROM ALL SOURCES
From April 1st, 1959 to March 31st, 1960

	Gross Receipts	Refunds	Net Receipts
Income Account	\$143,630,138.51	\$ 82,016.68	\$143,548,121.83
Transferred Collections	113.14	—	113.14
Suspense (Unapplied receipts carried forward, subject to refund)	7,752,112.07	7,228,767.25	523,344.82
	<u>\$151,382,363.72</u>	<u>\$ 7,310,783.93</u>	<u>\$144,071,579.79</u>

Statement "B"

STATEMENT OF RECEIPTS INCOME ACCOUNT
From April 1st, 1959 to March 31st, 1960

INCOME ACCOUNT:
PROVINCIAL MINERALS:

	Gross Receipts	Refunds	Net Receipts
Coal Fees, Rentals, etc.	\$ 57,538.47	\$ 280.00	\$ 57,258.47
Coal Royalty	79,090.55	2.50	79,088.05
Coal Mines Act Sundry Revenue	2,454.75	3.00	2,451.75
Petroleum & Natural Gas Fees, Rentals etc.	30,976,442.14	57,249.45	30,919,192.69
Petroleum & Natural Gas Royalty	25,366,586.58	8,978.09	25,357,608.49
Crown Reserve Sales	80,141,628.00	—	80,141,628.00
Mining Miscellaneous	756,492.63	4,995.45	751,497.18

SCHOOL MINERALS:

Coal Fees, Rentals, etc.	2,607.26	160.00	2,447.26
Coal Royalty	11,217.84	2.45	11,215.39
Petroleum & Natural Gas Fees, Rentals, etc.	1,763,997.30	1,526.26	1,762,471.04
Petroleum & Natural Gas Royalty	1,972,360.94	2,825.40	1,969,535.54
Crown Reserve Sales	1,181,349.17	—	1,181,349.17
Mining Miscellaneous	5,412.04	—	5,412.04

MINERAL TAXATION ACT:

Mineral Tax	1,251,782.35	8,984.08	1,247,798.27
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PIPE LINE ACT SUNDAY REVENUE

6,307.50	10.00	6,297.50
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ADMINISTRATION SUNDAY REVENUE

53,367.90	2,000.00	51,367.90
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MISCELLANEOUS (Casual)

1,503.09	—	1,503.09
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TOTAL INCOME ACCOUNT

(Carried to Statement A)	\$143,630,138.51	\$ 82,016.68	\$143,548,121.83
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ACCOUNTING DIVISION

Statement "C"

EXPENDITURE CLASSIFIED BY APPROPRIATIONS AND CHARACTER

FOR THE YEAR ENDED MARCH 31st, 1960

INCOME ACCOUNT

SERVICE	2002 Deputy Minister's Office	2003 Accounts Division	2004 Pipe Line Division	2005 Geological Division	2006 Mines Division	2007 Mineral Rights Division	2008 Mineral Tax Division	2009 Oil and Gas Conservation Board	2010 Technical Division	2011 Postage	2012 Printers, Stationery & Office Supplies	2013 Administration Gas Resources Preservation Act	2014 Right of Entry Arbitration Board	2015 Supervisory and Safety Training Program	2016 Geophysical Branch	2017 Abandonment of Mining Properties	2018 Redemption of Mineral Titles	TOTAL
Advertising																		13,887.15
Automobiles			150.09															5,527.72
Compensation			4,278.52															2,750.00
Contract Labour																		36,277.52
Books and Binding	248.76	67.03	51.80		21.75	441.90												2,421.14
Equipment	165.67	761.52	608.59		912.55	2,131.18												4,753.25
Examinations					518.37													518.37
Freight, Express and Cartage		756.79																756.79
Rents																		3,600.00
Miscellaneous Supplies and Expenses	503.89	165.73	1,110.41		114.20	385.98	83.04											11,332.21
Newspapers and Periodicals	484.16	31.75	61.02			80.17	80.25											825.43
Ostages			8.00			744.43												12,535.18
Printing and Stationery																		28,704.01
Leases, Rentals and Insurance																		93,168.15
Redemption of Mineral Titles (Refunds)	113.00		410.10			279.41												76,151.39
Repairs and Replacements	217.17	816.33	42.15		185.34	900.30	435.74											76,151.39
Salaries	38,191.24	86,186.02	33,897.01	3,166.67	65,215.28	197,858.45	68,384.61											75,945.41
Special Services																		571,015.56
Topographic Services																		1,203.50
Telegrams and Telephones	1,561.64	37.80	1,365.34			253.45	3,040.69	98.70										8,932.37
Travelling Expenses	1,893.95	358.50	5,848.77	25.00	7,908.33	3,222.74	2,513.19											47,830.98
TOTAL: Income Account	43,878.98	89,181.47	47,831.80	3,191.67	77,560.18	221,220.85	71,515.28	663,049.50	188,396.42	11,857.31	27,104.07	1,634.60	70,421.42	3,600.00	45,779.61	39,027.52	76,151.39	1,680,952.07

ACCOUNTING DIVISION

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Statement "D"

STATEMENT OF NET RECEIPTS BY DIVISIONS
For Fiscal Year Ending March 31st, 1960

INCOME ACCOUNT:

Mineral Rights Division	\$142,238,703.32
Mineral Tax Division	1,247,798.27
Mines Division	2,451.75
Pipe Line Division	6,297.50
Miscellaneous (Administration Sundry Revenue, Sale of Salvage, etc.)	52,870.99
 TRANSFERRED TO OTHER DEPARTMENTS	113.14
 SUSPENSE (Unapplied receipts carried forward, subject to refund).....	523,344.82
	<hr/>
	\$144,071,579.79

Statement "E"

STATEMENT OF RECEIPTS — SCHOOL MINERALS
From April 1st, 1959 to March 31st, 1960

INCOME ACCOUNT:

	Receipts	Refunds	Net Revenue
Coal Fees, Rentals, etc.\$	2,607.26	160.00	2,447.26
Coal Royalty	11,217.84	2.45	11,215.39
Petroleum & Natural Gas Fees, Rentals, etc.	1,763,997.30	1,526.26	1,762,471.04
Petroleum & Natural Gas Royalty	1,972,360.94	2,825.40	1,969,535.54
Crown Reserve Sales	1,181,349.17	—	1,181,349.17
Mining Miscellaneous	5,412.04	—	5,412.04
 \$ 4,936,944.55	\$ 4,514.11	 \$ 4,932,430.44	

Statement "F"

STATEMENT OF RECEIPTS AND EXPENDITURE
For Fiscal Year Ending March 31st, 1960

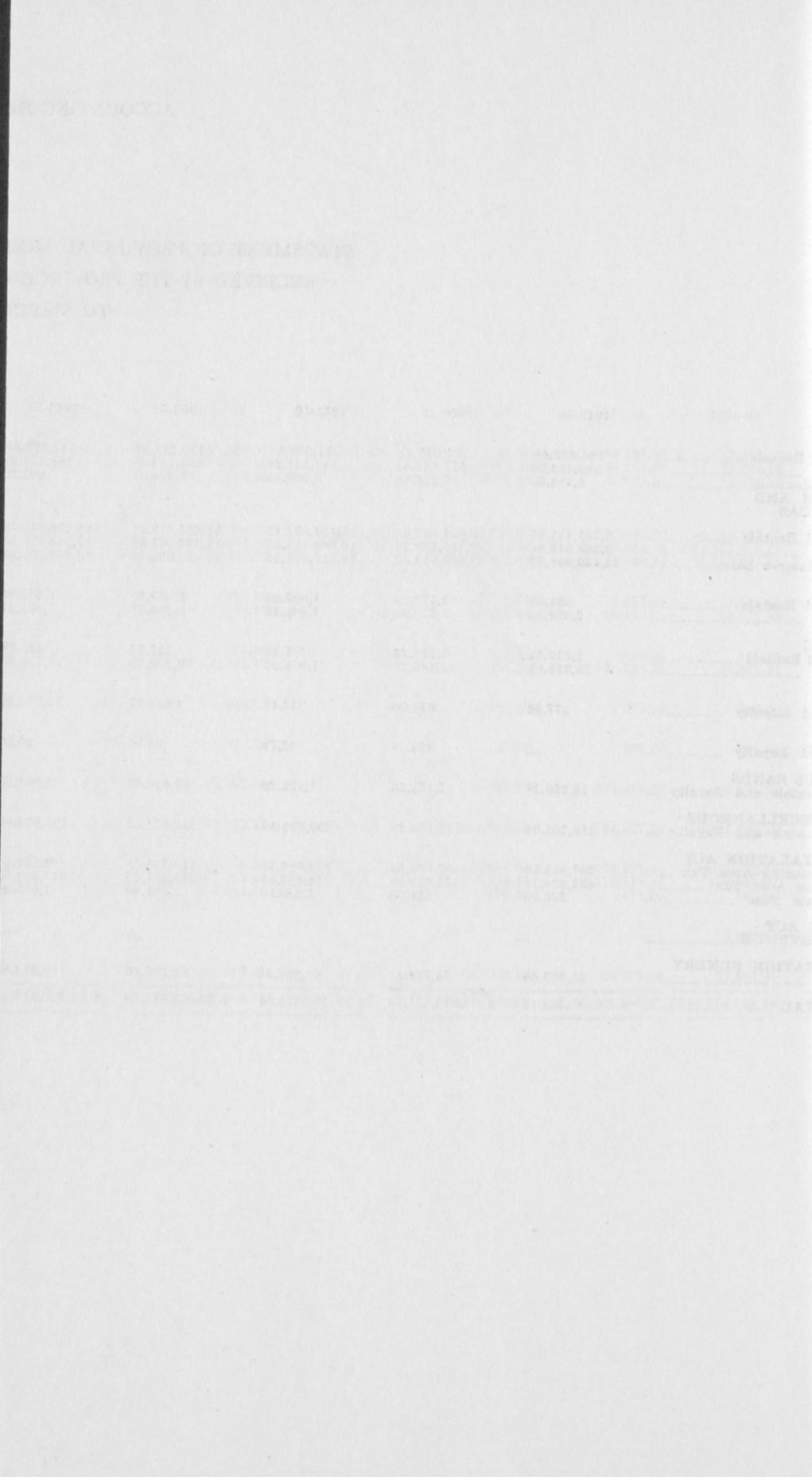
Gross Receipts	Refunds	Net Receipts	Net Revenue on Income Account	Total Expenditure from Appropriations	Surplus on Income Account
\$151,382,363.72	\$7,310,783.93	\$144,071,579.79	\$143,548,121.83	\$1,680,952.07	\$141,867,169.76

ACCOUNTING DIVISION

STATEMENT OF PROVINCIAL MINERALS REVENUE BY FISCAL YEARS
RECEIVED BY THE PROVINCE FOR THE PERIOD APRIL 1st, 1949
TO MARCH 31st, 1960

Statement "G"

	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	Total
FEES AND RENTALS												
Fees and Rentals	\$ 185,412.49	\$ 174,035.27	\$ 211,582.89	\$ 170,286.62	\$ 142,278.66	\$ 49,933.84	\$ 50,132.58	\$ 66,415.78	\$ 75,001.67	\$ 58,407.60	\$ 57,258.47	\$ 1,240,745.87
Royalty	600,493.96	577,667.84	394,441.24	354,123.99	268,694.28	216,147.06	201,607.49	151,790.88	102,601.90	95,187.48	79,088.05	3,041,844.17
Sundry Revenue	6,183.50	5,335.30	5,209.45	4,526.05	3,902.20	3,067.90	2,816.20	2,792.85	3,040.30	2,504.50	2,451.75	41,830.00
ROLEUM AND TURAL GAS												
Fees and Rentals	5,741,111.95	9,034,896.06	14,134,672.25	18,236,470.24	23,096,649.12	19,057,601.56	19,869,509.92	24,307,569.78	29,309,061.99	28,112,930.30	30,919,192.69	221,819,665.86
Royalty	3,368,918.86	4,760,569.46	10,062,772.17	12,353,945.64	17,048,688.02	18,519,831.09	26,610,386.37	34,489,488.26	30,352,487.86	23,502,143.38	25,357,608.49	206,427,326.60
Crown Reserve Sales	23,180,998.77	28,008,052.42	12,517,931.33	19,659,005.63	49,590,009.60	38,954,155.80	71,931,568.77	67,531,659.11	56,508,696.49	52,617,146.15	80,141,628.00	500,640,852.07
TOTAL												
Fees and Rentals	564.00	3,129.00	1,005.60	1,005.60	1,005.60	1,005.60	1,005.60	1,010.60	1,010.60	1,005.60	1,005.60	12,753.40
Royalty	2,024.92	9,230.96	4,895.32	6,806.71	7,063.37	7,978.06	9,868.92	10,050.54	9,859.84	10,130.02	10,677.35	88,586.01
ARRIYING												
Fees and Rentals	1,019.81	1,176.72	291.28	227.23	325.01	185.52	173.30	213.25	117.75	110.00	165.00	4,004.37
Royalty	29,939.08	36,486.29	27,908.36	29,309.75	38,798.28	41,181.51	39,552.17	53,590.28	45,540.05	50, 194.15	58,825.21	451,325.13
ARTZ												
Fees and Royalty	377.56	630.00	853.47	3,826.17	15,750.92	3,283.19	1,944.82	1,180.35	1,040.00	4,079.76	680.00	33,646.24
ACER												
Fees and Royalty	—	325.08	42.79	30.00	30.00	1,510.00	1,117.50	1,346.15	500.00	690.00	490.00	6,081.52
UNIMINOUS SANDS												
Fees, Rentals and Royalty	13,350.28	7,173.20	7,173.20	52,480.95	62,994.50	42,543.76	197,997.20	89,878.58	479,047.55	363,416.28	544,075.79	1,860,131.29
VING MISCELLANEOUS												
Fees, Rentals and Royalty	218,265.08	126,786.20	299,699.45	223,672.12	191,953.44	105,279.64	185,582.37	107,109.32	204,413.10	134,827.84	135,578.23	1,933,166.29
NERAL TAXATION ACT												
Non-Producing Area Tax	297,883.10	307,062.62	323,185.71	310,285.08	283,853.18	277,842.74	264,496.50	272,883.90	282,057.60	306,179.40	337,452.83	3,263,182.66
Producing Area Tax	452,838.16	526,029.61	444,293.91	572,671.45	717,352.55	1,031,922.72	1,031,802.40	1,070,380.73	1,232,795.31	1,115,478.85	909,799.94	9,105,365.63
Certificate Fees	286.50	511.00	2,320.10	3,204.00	1,055.50	1,467.00	914.50	1,101.50	1,056.50	472.00	545.50	12,934.10
PE LINE ACT												
NDRY REVENUE	—	—	—	—	—	—	—	—	—	—	—	6,297.50
MINISTRATION SUNDAY												
VENUE	21,915.60	34,734.13	61,946.42	83,735.45	90,413.82	69,268.78	51,489.41	75,902.99	67,642.46	66,789.46	51,367.90	675,206.42
TOTAL	\$ 34,121,583.12	\$ 43,613,831.16	\$ 38,500,224.94	\$ 52,065,612.68	\$ 91,560,818.05	\$ 78,384,205.77	\$ 120,452,448.02	\$ 128,234,364.85	\$ 118,675,970.97	\$ 106,441,697.27	\$ 138,614,188.30	\$ 950,664,945.13



ACCOUNTING DIVISION

STATEMENT OF SCHOOL MINERALS REVENUE BY FISCAL YEARS
RECEIVED BY THE PROVINCE FOR THE PERIOD APRIL 1st, 1949
TO MARCH 31st, 1960

Statement "H"

	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	Total
es and Rentals	\$ 6,313.28	\$ 6,965.91	\$ 3,761.05	\$ 5,888.62	\$ 6,474.45	\$ 2,099.50	\$ 1,797.51	\$ 1,871.19	\$ 1,808.42	\$ 2,243.01	\$ 2,447.26	\$ 41,670.20
yalty	51,074.51	45,643.83	42,969.61	25,368.52	17,874.97	14,759.80	15,232.15	13,343.74	6,621.37	4,488.33	11,215.39	248,592.22
OLEUM AND URAL GAS												
es and Rentals	514,065.59	744,745.23	1,245,877.55	1,445,874.57	1,501,344.38	1,597,125.63	1,500,750.38	1,512,245.53	1,735,009.23	1,721,016.74	1,762,471.04	15,280,525.87
yalty	242,199.47	429,423.19	975,317.20	1,157,006.02	1,516,438.34	1,694,748.02	2,184,005.64	2,803,026.05	2,459,646.73	1,944,357.39	1,969,535.54	17,375,703.59
own Reserve Sales	50,449.43	1,072,579.97	693,357.64	3,868,438.03	3,646,107.46	1,059,164.00	4,143,163.73	1,519,201.38	2,133,139.64	992,806.31	1,181,349.17	20,359,756.76
MINOUS SANDS												
es, Rentals and Royalty	1,845.00	565.00	565.00	892.05	982.10	623.20	1,184.20	1,558.12	8,618.62	3,277.25	4,827.26	24,887.80
NG MISCELLANEOUS												
es, Rentals and Royalty	....	3,896.01	3,768.15	1,008.00	23.00	350.61	784.75	853.00	717.00	763.72	584.78	12,699.02
	\$ 865,947.28	\$ 2,303,819.14	\$ 2,965,616.20	\$ 6,504,475.81	\$ 6,689,194.70	\$ 4,363,870.76	\$ 7,846,868.36	\$ 5,852,099.01	\$ 6,345,561.01	\$ 4,668,952.75	\$ 4,932,430.44	\$ 53,343,835.46

PERSONNEL

The number of employees in the Department showed an increase of five from 192 on April 1st, 1959 to 197 on March 31st, 1960.

During the same period, 40 employees left the Department, of these 8 left the city, 7 resigned to accept employment outside the government service, 3 were dismissed, 2 retired and the remainder left for various other reasons.



TWELFTH ANNUAL REPORT

Department of
Mines and Minerals
of the
PROVINCE OF ALBERTA

For the Year Ended March 31
1981

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